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No. 1073

**EKO: ECONOMICS AND ORGANIZATION
OF INDUSTRIAL PRODUCTION**

No. 9, September 1983

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Except where indicated otherwise in the table of contents the following is a complete translation of the Russian-language monthly journal **EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA** published in Novosibirsk.

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READERS' RESPONSE TO EKO's LABOR DISCIPLINE DISCUSSIONS

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 9, Sep 83 pp 3-19

[Lead article: "Filling the Struggle for Discipline With a Great Deal of Content"]

[Text] Several months have passed since discipline was named as the link that must be grasped in order to pull the entire chain, to improve the quality of work, to accelerate its rates, and to make production less expensive. "This chain is large and heavy," emphasized General Secretary of the CPSU Central Committee, Yu. V. Andropov, warning against possible sliding along the surface and being bogged down in trivia. "Without the proper discipline--labor, planning and state--we cannot go forward rapidly."

This is the way the issue was posed.

It is remarkable that V. I. Lenin uttered the same uncompromising words about discipline. As early as 1918 he wrote: "...The success of socialism is unthinkable without the victory of the proletarian conscientious discipline..."¹ and later: "...Only the strictist organization and labor discipline will lead us to socialism."²

Thus the present and the past call out to one another through the urgency of a single problem, although it is in a new stage of social development.

During the months that have passed since the November (1982) Plenum of the CPSU Central Committee work has been done which has been felt by everyone. First of all, the very attitude toward this problem has changed. As our authors and readers write, there are greater demands on the part of the managers and stricter control over the condition of labor discipline. Party and trade-union organizations of enterprises have begun to devote more attention to questions not only of labor discipline, but also of contractual, supply and financial discipline.

But the editorial staff of our magazine (as, obviously, other press agencies as well) continues to receive letters that contain questions about many aspects of discipline. This article will serve as an answer to some of the letters that have come in.

First--Order, Everything Else--Later

"In classes I have always explained that the main thing for us is labor productivity. And suddenly it is discipline. Explain, please..."

N. Bobrova, Syktyvkar

Discipline as a form of social connection among people (V. I. Lenin's definition) and as one of the elements in production relations is at the same time a necessary prerequisite, a condition for any coordinated activity of people, and above all, for labor and economic activity, a prerequisite and a component of any administrative process.

One can also put it more simply. In order to work successfully and to live happily, it is necessary to have order. Not conversations about the advantage of order, not appeals to struggle for organization, and not slogans about the significance of discipline, but simply order, that very thing which Lenin always demanded. Discipline is the observance of order. And only by relying on this order is it possible to confidently solve problems of increasing labor productivity, scientific and technical progress and many other things.

Our readers do not need to be reminded of the models of organization and discipline that were exhibited by the Soviet people both during the years of industrialization and during the years of the Great Patriotic War. These are being manifested today as well at objects whose significance for the country is obvious to everyone without appeals or persuasion. Party discipline, which is a model for all spheres of economic activity, is maintained at a high level.

But why then in thousands of daily business meetings and production situations do we encounter violations of deadlines and commitments, slovenliness, and violations of elementary labor discipline? We shall not try to hide the fact that the scale of these phenomena alarms each of us. And everyone could give examples and illustrations.

For many years sociologists of the Institute of Economics and Organization of Industrial Production of the Siberian Branch of the USSR Academy of Sciences have been studying social problems of the city of Rubtsovsk in Altay Kray. This is a typical industrial center, a city of average size (158,000 residents). The managers of the enterprises and the city administration here are very attentive to recommendations of scientists, which has made it possible to relieve the tension of many social problems, including to reduce labor turnover by approximately half. But, nonetheless, according to data of sociologists (investigation of 1971-1980),³ the citywide losses of working time are the same as if every fifth worker did not work year around! In Rubtsovsk, as everywhere, they are declaring a shortage of labor force. But the entire shortage of personnel calculated by managers of the city could be made up for by 100 percent by eliminating the actual losses of working time: whole-day absences, intrashift idle time, vacations with the permission of the administration, and so forth. (Of course, we are not speaking about the "assortment" of labor force, but only about its overall numbers.)

Is Rubtsovsk an exception? Let the practical experience of our readers provide an answer to this.

About ten years ago, calculations were made (unfortunately, they are not regular), which showed that the annual losses of working time in the country just because of disorganized transfers of workers from one enterprise to another were tantamount to removing from production 540,000 workers who could produce approximately 5-5.5 billion rubles' worth of products.⁴

Another example. "According to our rough calculations, approximately one percent of the men employed at industrial enterprises and construction sites failed to come to work each day because of drunkenness."⁵ One percent of the working men amounts to several hundred thousand people. Hundreds of thousands of absentees each day, year around, just because of drinking!

These figures are only a part of the overall picture. The scale of these cases and their persistence confirm that concern for discipline is not a one-time or short-term problem. And we must solve it regularly, but the main thing is that we must have an understanding of the significant complexity of the problem itself.

The Discipline Which We Choose

"I am amused to read the discussions of your scientists: psychology, sociology, microclimate or whatever...make a judgment about each absence! Impose a fine for tardiness, take away their apartments--this is what is needed. I dare say that in our day people were not absent as much as they are now. They were afraid!..."

I. Goldoba, Kemerovo

Many think that the norm of administrative wisdom in interrelations between the manager and the subordinate is contained in the aphorism: "If you do not want to, we will make you, if you cannot, we will teach you." Here it is assumed that the error of administrative power always reflects the interest of the society and the subordinate has exclusively his own interests at heart, which are not the same as the interests of the society. The formula "If you do not want to, we will motivate you so that you will want to" is poorly popularized, although a good deal of experience has been accumulated in applying it at leading enterprises.

The two aforementioned approaches are typical of the methods of creating and maintaining labor discipline. There are only two ways of influencing the will of the participants in labor relations: persuasion and coercion. In the economic sphere they correspond to material and moral incentives and punishment.

The discipline of coercion provides for observance of order in spite of the will of the worker. V. I. Lenin's remarks are interesting: "...We correctly and successfully applied coercion when we first managed to base it on persuasion":⁶ "First we must persuade, and then compel."⁷

The discipline of persuasion is the result of the recognition by the workers of the community of their private and public interests under the conditions of socialism. The labor collective and the relations that take form in the process of labor play an important role in the formation of persuasion. Let us emphasize that a person's ideological convictions are reflected not in his words, but exclusively in his labor. Therefore, to write in the job evaluation about the ideological conviction of a poor worker or a weak manager is plain self-deception.

It is remarkable that the search for ways of influencing labor discipline is taking place everywhere.

Disciplinary and administrative commissions, councils of labor honor, and schools of socialist labor discipline have proved their effectiveness in Tula Oblast. Hundreds of thousands of people have gone through these schools.

In Kremenchug the city council of directors has developed a unified program for improving discipline and a unified approach to hiring and firing workers. By a decision of the council of directors, once a month at all enterprises they hold a "day of discipline" with the participation of the administration, the court, the procurator's office and agencies of the administration of internal affairs. The same "days of discipline" are held in the microrayons. In all cases the point of departure for the measures is the motivation of the working collectives themselves and the public to observe labor and legal discipline. As a result there has been a marked reduction of the number of legal violations and discipline has become stronger in production.

At the Leningrad optics-mechanics association, efficient labor organization has become the basis for strengthening discipline. Here they extensively apply the policy of informing each worker of the work plan. Three days before the beginning of the planned period each worker is given an assignment for the minimum for the week. At LOMO the workers report to members of the brigade, and they have introduced the practice of issuing orders from the general director for the implementation of the decisions of the workers' meetings. While previously after a disciplinary violation there came an order which was then sometimes discussed at the workers' meeting, now the collective first discusses the behavior of the violator and makes a decision about the punitive measure, and only after this is the decision reinforced by an order from the chief of the shop or division.

Excellent labor traditions have taken form at the Tiraspol sewing factory. Here too, labor organization and skillful educational work constitute the basis of strengthening labor discipline. At the factory 97 percent of the norms are technically substantiated, conditions for labor and recreation have been developed with the help of physiologists and sociologists, and a ramified system has been arranged for satisfying the needs of the working men and women. It is no wonder that for many years the factory has not issued a single order to fire someone for violation of labor discipline.

In Voronezh Oblast they have devoted serious attention to organizing leisure, developing the art of spending free time, and creating a certain public opinion regarding various occupations outside the sphere of labor, and they skillfully take advantage of the rich possibilities of national traditions--street holidays, folklore festivals, gatherings of citizens and competitions of rayons. And these forms of work with people during nonworking time have a positive effect on labor, organization and discipline.

In spite of the randomness of the examples that have been given, they have something in common--a respectful and attentive attitude toward people, the desire to organize their labor and recreation, to satisfy their needs and, only on the basis of this, to be demanding. This principle--"demandingness and respect" was discovered by the remarkable soviet pedagogue, A. S. Makarenko, and he publicized it in all ways. Maximum respect for the individual in combination with maximum demandingness--such was his approach.

A consistent proponent of methods of persuasion and education, V. I. Lenin repeated many times the idea of the need to develop a new, socialist, conscientious discipline. "We must not forget that we first arrived at this preliminary point in history when the new discipline, labor discipline, the discipline of comradly communication, soviet discipline, is being developed in fact by millions of workers and exploited people. We do not claim rapid successes here, and we do not count on them. We know that this cause will occupy an entire historical epoch."⁸

The last words of V. I. Lenin help us to understand why today, after many years of socialist construction, after immense social transformations in the country, the problem of discipline remains crucial. Like many other questions related to communist education of the individual, to the change in his psyche and his views, this is a question of an entire historical epoch.

Yes, I should like very much to rely already today on the self-discipline of all participants in the labor process. But is this realistic? Not all labor brings internal satisfaction. Not all labor is adequately motivated by its complexity and difficulty. Not every collective is a socially mature educator of the worker. The interests of the worker do not always coincide with the interests of the collective, nor do his life supports and moral ideals coincide with the ideals of the society. Errors in management leave spaces for obtaining unearned income, easy earnings or slipshod work. In this case, the methods of administrative and economic coercion to work are inevitable and, moreover, the central means of acting in the interests of the entire society. And here we find support in the positions of V. I. Lenin. Awakening the consciousness of the masses, the proletarian state was forced to combine educational activity with the most rigid measures with respect to loafers and those who undermine the work process. Speaking of this problem, Vladimir Il'ich noted: "This is the task of ensuring the strictest discipline and self-discipline of the workers...Without coercion this task is completely impossible."⁹

In the discipline which we chose the tactics dictate the most varied forms of organization, education, stimulation and coercion. And the strategy makes it possible to see the goal: to instill self-discipline, whereby the free worker will perceive the needs of society as his own personal needs and experience joy from participation in any socially useful work.

But that is tomorrow. And today? Well, since we have not all grown to the point of unconditional self-discipline, does this mean that the path of coercion is the main one?

No. The main path has been and still is the one of organization. Intelligent organization of labor, efficient organization of the implementation of decisions, organization of an effective system of administration. Organization--this is everything!--A. K. Gastev said at one time. And this has been confirmed by time. Organization both educates and coerces.

The Foundation of Conscientious Discipline--The Feeling of Being a Master

"Brigade organization presents broad possibilities of educating the workers. The main thing is that they gain a sense of being the master. Unfortunately, shortcomings in supply and certain other circumstances make it impossible to obtain from brigade organization everything that it can provide. Please consider this question in greater detail."

Yu. Bagramov, Moscow

On the pages of our magazine we have discussed the experience of many enterprises of the country, large and small. The Volga automotive plant and the Magnitogorsk metallurgical combine, the Minsk tractor plant and the Tiraspol sewing factory. The Leningrad Elektrosila and the modest railroad car depot in Ussuriysk. There is an important feature which joins these and many other leading enterprises together: the sense of being a master is cultivated in their collectives. This is precisely what helps to maintain labor discipline, if not on an irreproachable level, at least on a fairly high one, and to achieve economic successes.

But we are well aware of the many obstacles that stand on the path to instilling the feeling of being the master. Hundreds of books and thousands of articles have been written about the rights of the enterprises. Only by being completely responsible for current activity and having clear-cut rights when determining the prospects for their development, by constructing all external relations on a legal property basis, by having extensive rights in the area of staffs, their structure and payment, and being a full partner in the system of planned relations and not simply an executor, only with all these can the enterprise instill in each member of the collective the sense of being a real master, for whom labor discipline will be a natural and unburdensome expression of his internal conditions.

The sense of being the master of the means of production entrusted to you by the state, who is responsible to society for his products, includes as an indispensable part the sense of the "master-consumer."

But if the consumer has no rights when dealing with the supplier and the supplier can place him in an impossible situation on any day, the feeling of being a master entails the most difficult burden. Typical in this respect is the letter from the equipment operator of the Sokal chemical fiber plant, L. Yatskova. "Interruptions in the deliveries of raw materials to our plant are not episodic, but chronic. For this reason we failed to give the country 26,700 tons of viscous fiber and 14,500 tons of sodium sulfate. And yet it is thought that the plant is always 'keeping up with the plan.' How does one understand this? It turns out that they have reduced it fourteen times in recent years. Imagine, fourteen times! In other words the USSR Ministry of the Chemical Industry has concealed--one cannot put it any other way--the possibility of producing more than 40 million rubles' worth of products with existing capacities. An entire plant has slipped away from the state! It is not difficult to understand who needs these adjustments to the plan. Obviously they are needed by the ministry itself, the managers of the branch, in order to create the appearance of well-being, in order to put up a smoke screen, in order to provide themselves with a peaceful life?"¹⁰

In this example we see how closely the labor discipline of the working collective and state and planning discipline are interwoven into a unified whole. The author of the letter displayed an authentic sense of being a master. But is this sense cultivated by the situation which is described by the equipment operator from Lvov Oblast? Let us recall, as V. I. Lenin emphasized: "If we are to conscientiously teach discipline to the workers and peasants, we must begin with ourselves."¹¹ To begin with ourselves means to speak primarily about control and responsibility for our own actions. Naturally, we recall here Lenin's workers' and peasants' inspection team. A good deal has been written about its functions and the significance which Lenin attached to it. Another supervisory institution is less well known--the disciplinary court that was created three years after the workers' and peasants' inspection team was, when it became clear that many violations of state discipline come from the managers of state departments themselves. In this connection, let us give an excerpt from a legal source.

"The disciplinary court is a special court which existed in the USSR up to 1928 for considering cases concerning job omissions, crimes and incorrect actions on the part of officials of state agencies if these actions did not involve criminal responsibility. In the RSFSR the disciplinary courts existed from 1923 under the All-Russian Central Executive Committee and the provincial ispolkoms, and in 1926 they were also organized under the central executive committees of the autonomous republics and kray and oblast ispolkoms. The disciplinary courts were assigned cases regarding job omissions and crimes only of officials: members of the ispolkom, officials elected or approved by the ispolkoms; managers of enterprises under the jurisdiction of the ispolkom, and so forth."¹²

We have taken the liberty of recalling the disciplinary courts only because they embodied the idea of the inevitability of responsibility for one's actions and were not an episodic way of controlling the management level, but

a system of control that was created under V. I. Lenin and operated in the same way that the workers' and peasants' inspection teams did, on signals from the labor collectives, and it disciplined that group of managers who were responsible for daily subordination of private, departmental and immediate interests to the higher national economic interests.

Returning to the present, one should emphasize that such forms of democratization of production as election of managers and their extensive responsibility and replaceability by the will of the collective, the redistribution of administrative functions and the transfer of an increasing number of them to the collectives themselves, the strengthening of brigades and their legal support, the decisive granting of greater independence and responsibility to youth--all these are actions which reinforce discipline, both labor and planning, in the most immediate way.

In completing this section, let us turn to one other facet of control. It is known that all important decisions, regardless of the level on which they are developed, are made collectively. Control is established over their implementation. But it is not eternal: at some point control is removed from any decision. By whom? By the same collective agency that made the decision? No, in the majority of cases this is by an individual official and, of course, without public notice, although at the time the decision was made it was publicized as broadly as possible. It seems that an efficient system of publicity corresponds more to the feeling of a thrifty and disciplined master which we are trying to instill in the soviet people: in the decision itself one should indicate the time periods for future inspections on implementation, and in publications (or verbal announcements if the decision is internal, say, intrashop) regarding the results of the inspections one announces: a specific part of the decision has been fulfilled to a certain degree. Well, the edifying part of the decision, naturally, remains forever.

The Ruble-Organizer and the Ruble-Hooligan...

"But what should be done? I write orders as they tell me to because everyone must be able to earn, otherwise they will leave the shop and we will lose altogether and there will be no fulfillment whatsoever..."

L. Fominskaya, Zlatoust

The system of wages that was developed at the Volga automotive plant is widely known. By finding the real contribution of each worker, this system makes it possible to pay the workers of all basic and auxiliary occupations in a logical way. There are a number of modifications of the VAZ system. And the search for other effective systems of accounting for and stimulating labor goes on. Everywhere where the payment for labor approximates the real contribution of each participant in the production process, the ruble acts as a powerful organizer of labor discipline.

But another practice has also become widespread. A surplus of jobs (and in some cases also an actual shortage of personnel) makes it necessary to pay not for the complexity, but for the prestige of certain kinds of labor, to artificially increase earnings by adding to orders and closing one's eyes to writeups and undeserved bonuses. All this does not educate, but corrupts--let us call things by their real names. The ruble becomes to some degree a nonlabor factor and ends up to be a disorganizer of production. It makes the administration of the shops dependent on self-seekers, it distorts ideas about social values, and it incorrectly orients youth toward a selection of a path in life. When accumulating, this semi-earned ruble makes it possible to abandon production for several months during the summer and go to the gardens, hothouses and berry patches, and inculcates the very idea of earnings "outside" of one's home production.

As we can see, this semi-earned ruble torpedoes labor discipline. We know that it is necessary to fight against this, but we should understand clearly that it will not go away without a struggle. One can find its defenders at all levels, wherever it has been able to reach.

Today this semi-earned ruble stands to defend the interests of unskilled, inefficient, unprofessional managers. They themselves enter the role of violators of labor discipline, by sanctioning overtime work not in extreme situations, as is permitted by the labor code, but continually, somehow compensating this way for the irregularity and disorganization in production and making workers become accustomed to regarding overtime earnings as the norm. It is no wonder that about half of all the absences come in the first ten days of the month, about 30 percent in the second ten days, and little more than 20 percent in the third ten days.¹³

This same semi-earned ruble about which we are writing, as a rule, goes not to the family, but for drinking, and leads to absences and violations of the law. Local party and soviet leaders are well aware of this. For example, the first secretary of the Gorkiy CPSU Obkom, V. A. Sokolov, wrote this: "85.8 percent of all the violations of labor discipline and public order and 90 percent of all the absences are directly or indirectly related to drunkenness and its consequences."¹⁴

Drunkenness as the source of the heaviest social losses is a separate, very important and painful subject to which our magazine will turn again. It is necessary to understand clearly that the struggle for discipline and a conciliatory attitude toward alcoholism are incompatible.

Both the Disease and the Treatment--Largely the Affair of the Territory

"I have been told that a chairman of a city soviet with advanced experience wrote in your magazine about how they equalized conditions at various enterprises. Please tell us at your earliest convenience the issue in which this question which is very painful to us appeared..."

K. Ulybyshev, Saratov

Discipline is very closely attached to the territory: the city, enterprise or rayon. In certain economic rayons violations of disciplines and labor turnover can be several times higher than in others. At the level of the enterprises of one branch, but which are located in various regions of the country, these differences can reach 50-fold.¹⁵

But within the cities and rayons as well a multitude of paradoxes arise.

In one city at enterprises of various ministries, there are various levels of difficulty of labor, conditions for payment, additional incentives and supply. One must speak not about the unity of the personnel policy, but about a unified approach to disciplinary requirements under these conditions.

In various parts of one city, elements of the social infrastructure differ sharply from one another. The influence of enterprises on these conditions is incomparably weaker than the influence of the aforementioned conditions on the workers of the enterprise.

Each enterprise retains a certain number of people "in reserve" (mainly for emergencies and patronage assistance). Their disorganized and not very productive labor in rural areas interrupts the labor rhythm both of the kolkhoz workers and of the patrons themselves. Numerous articles in the press regarding this problem, suggestions to place relations between the city and country on an economic basis, and to transfer the job placement of workers who have been removed from enterprises (along with rights and resources) to local soviets, have not been realized so far. As a result an entire army of camouflaged seasonal workers retard certain steps toward increasing labor productivity which are possible even today, artificially creates and exacerbates the shortage of labor force, and creates a situation of irresponsibility and negligence in many sections of the enterprises and institutions. The society sustains an immense amount of material and moral harm from this.

Many specialists think that only by concentrating the entire labor policy (and resources) in the hands of the local authorities, by thus joining the work of personnel divisions of the city and country into a unified territorial network and simultaneously greatly expanding the rights of the enterprises, is it possible to unravel this knot. Of course, this approach requires experimental testing.

Not a Ready Formula, but a Search

"Give your complete attention to the system of indicators I suggest. Its main goal is to completely combine the interests of the state, the collective and the individual. According to the proposed formula one calculates an integral indicator which completely solves the problem that has been set."

Engineer of the Division for Labor and Wages, M. Sverdlovsk

Up to this point we have been speaking basically about labor discipline. But the question has been posed more broadly: it is necessary to improve planning, financial, technological, supply and other kinds of discipline as well.

EKO authors have repeatedly addressed questions of planning and state discipline (incidentally, they have addressed problems of technological discipline as well). The desire which exists out of inertia to encompass with planning indicators the largest possible number of aspects and manifestations of the country's economic activity is no longer feasible in the next stage of the development and complication of economic, legal and social ties, and only constrains local initiative.

Contractural discipline and delivery discipline have still not become a support point upon which production ties can confidently rest. This support is eroded by streams of unbalanced decisions, eaten away by a multitude of value indicators, and broken apart by the unequal rights of the partners.

It is necessary to return to the "Provisions Concerning the Socialist State Production Enterprise." They have been in effect for eighteen years. And they have been violated for just as long. It is time to figure out honestly whether much is left of this document which calls for discipline on the part of all participants in the production process.

In the present phase of the development of socialism we have still not overcome a partial lack of correspondence between the interests of the individual and the interests of the collective, and between the interests of the collective and the interests of the entire national economy, which makes state discipline not a summary of automatic realized norms and rules, but a field of conflict of forces that are striving to achieve goals that are not altogether compatible. While understanding this, one should not strive to develop a universal criterion for evaluation, a universal indicator which would reflect equally fully the interests of the state, the collective and the individual. There is no indicator that provides discipline for all. As for the objective contradictions which arise, they should not be eliminated, but used as an impulse for advancing forward. This is precisely the way the party evaluates the role of contradictions in our society. In the article "The Teachings of Karl Marx and Several Questions of Socialist Construction in the USSR," Yu. V. Andropov warns against a lack of attention to contradictions, against ignoring them, "...A most important aspect of the matter," he writes, "consists in correctly utilizing the contradictions of socialism as a source and a stimulus for its forward development."¹⁶

As we can see, with a sufficiently broad approach to problems of discipline one reveals its inseparable ties with the multitude of economic, legal and social structures in socialism. There arises the understanding that discipline is one of the most important buttresses of the society. One can see clearly its dependency on the nature of public division of labor, on the

system of planning and administration, on the peculiarities of the economic mechanism, the level of labor organization and existing legal norms, and on the state system of social values and the level of self-awareness of the members of the society.

But regardless of how complicated the influence and dependency may be when studying discipline as a social phenomenon, this should not conceal from us the tasks that are simple and indisputable.

It is necessary to account for the real condition of labor discipline and real losses. Let it be selective and of a particular moment, but let it be reliable. Without this it is impossible to take further steps either in understanding or in mastery of this social process. The existing forms of accountability do not reveal its entire depth.

It is necessary to have a strictly scientific and unbiased analysis of the problems of discipline, which takes into account all social aspects of this phenomenon. Sufficiently authoritative scientific subdivisions should handle this.

It is necessary to have information about the condition of discipline and its violations which is regular, reliable and consistent, an element of that publicity which V. I. Lenin demanded.

The little which we have listed--accounting, scientific analysis and publicity--will not require large material expenditures. But it does constitute a basis for future administrative decisions which are related to discipline.

As an element in human culture, the culture of relations among workers with one another and with the society, discipline takes form very gradually, reflecting the entire complexity of social life. Let us emphasize that we need discipline not in and of itself as some formal indicator of social order, but discipline as an instrument which is directed toward educating personnel, increasing the effectiveness of public production, and improving the well-being of the soviet people. Such discipline is not achieved by one order, one legal act or one effort of will. It is a matter for each and every one of us. And this problem can be solved only by "the entire world, all working people."

FOOTNOTES

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3. Artemov, V.A., Balykova, N.A., Kalugina, Z. I., "Vremya naseleniya goroda: planirovaniye i ispol'zovaniye" [The Time of the Urban Population: Planning and Utilization], Novosibirsk, "Nauka", 1982, p 83.
4. "Sotsialisticheskaya distsiplina truda: opyt, problemy" [Socialist Labor Discipline: Experience, Problems], Moscow, Profizdat, 1975, p 156.
5. NEDELYA, 1982, No 4.
6. Lenin, V. I., "Poln. sobr. soch.," Vol 42, p 216.
7. Ibid., Vol 43, p 54.
8. Ibid., Vol 36, p 385.
9. Ibid., Vol 36, p 163.
10. PRAVDA, 16 March 1983.
11. Lenin, V. I., "Poln. sobr. soch.," Vol 50, p 63.
12. "Yuridicheskiy solvar'" [Legal Dictionary], Moscow, Gosyurizdat, 1953, p 169.
13. See the selection "Labor Discipline and Turnover," EKO, 1980, No 5.
14. "Sotsialisticheskaya distsiplina truda: opyt, problemy," Moscow, Profizdat, 1975, p 137.
15. Ibid., p 156.
16. KOMMUNIST, 1983, No 3, p 21.

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'APATIT' PRODUCTION ASSOCIATION DIRECTOR DESCRIBES MANAGEMENT PROBLEMS

Novosibirsk **EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)** in Russian No 9, Sep 83 pp 20-41

[Article by G. A. Golovanov, director of the Apatit Production Association, deputy of the USSR Supreme Soviet, Hero of Socialist Labor, professor: "At the Head of the Collective"]

[Text] A Couple of Words About the Author, His Collective and His City

An unusual city beyond the arctic circle, a unique production, an amazing general director--these definitions automatically come to mind when one speaks about Kirovsk, the Apatit Association, and Georgiy Aleksandrovich Golovanov.

The first large city on the Kola peninsula, Kirovsk, was at one time almost twice as large as Murmansk. The same size of city grew up next to it--Apatit --a scientific center, the seat of the USSR Academy of Sciences in this region. It was from Kirovsk, which at that time was called Khibinogorsk, that we began the assimilation of the natural wealth of the peninsula: the ore of Kandalaksha, Kovdor, Moncha-tundra and Pechenga.

During the summer, the streets of Kirovsk are lit by the rays of the sun which rarely drops behind the mountains, and in the winter the snow and the walls of the buildings seem orange because of the street lights which are practically never turned off. On the radio they announce: "The length of the day--one hour forty minutes." One is enraptured by the austere beauty of the Khibin Mountains. In April the best ski trail in the USSR draws sportsmen here from many countries.

The largest association in the world for extracting ore containing phosphorus for Kirovsk is the same as Magnitka is for Magnitogorsk. Perhaps it is even larger. About 50 million tons of ore are extracted each year by the miners of Kirovsk. By 1990 this figure will increase to 60-63 million, and the output of apatite concentrate exceeds 20 million tons--750 carloads a day. The concentrate of the Khibin area determines the production of phosphorus fertilizers in the Soviet Union and is shipped to fourteen countries of the world. From each ton of apatite concentrate one obtains 2.5 tons of super phosphate.

Each of them produces an essential additional yield of wheat, cotton and other agricultural crops. The Food Program increased even more the significance of the Apatit Association in the country's economy.

Georgiy Aleksandrovich Golovanov has been in charge of this association for almost two decades. Before this he studied, was in the military service and worked as a mining engineer in the mines and pits of the Ukraine. He came to the position of general director of the Apatit Association from the post of Director of the Kovdor Mining and Enriching Combine.

In the center of Kirovsk is the modern building of the branch of the Leningrad Polytechnical Institute. Professor G. A. Golovanov teaches there. He also gives small special courses to the main groups of students of the Leningrad Polytechnical Institute in Leningrad. Yes, the director of the association is a professor and a doctor of sciences. Under Golovanov's leadership a flotation machine with a new design has been developed, and he has written books on enriching apatite-mepheline ores.

When does this leader of a collective of 20,000 find time to write books, to invent and to prepare for lectures? How does he find enough time for all of this? He is helped by the strict agenda and the high demandingness on himself and those around him. In Moscow, Murmansk and in Kirovsk itself, people who know Golovanov warn his guests, including journalists, that it is absolutely necessary to wear a tie, a fresh shirt and polished shoes when you go into his office. And you cannot be a minute late. Otherwise he will not talk to you. And this is quite correct.

Having worked for a long time in the post of director, I came to the conclusion that if I were to share my ideas about the style of administrative work, this could bring a certain advantage, primarily to beginning managers. Some of my advice and recommendations were published in the book "Notes of the Director," which was published in 1981 by the publishing house Ekonomika. The magazine EKO suggested that I develop certain ideas which were not reflected in the book. As a constant reader of the magazine, I am glad to fulfill this request.

I shall begin with an idea that is generally known, but fundamental: there is a major thing that joins production commanders together. This is their deep devotion to their duty and to the enterprise, the subordination of personal interests to the interests of the collective of which they are in charge and of the entire society, the arrangement of their management activity on the basis of norms of communist morality, soviet laws and the socialist way of life. Without these features, not a single director can be in charge of a labor collective for very long, even if his other characteristics as a person are fairly positive.

When I hear words that have been familiar since childhood to the effect that labor must become a vital need, I always think that this has already happened for the majority of soviet directors.

Inexpressible feelings overtake you when you see constructed in the association of which you are in charge production buildings, new areas of residential buildings, day nurseries and kindergartens, sports facilities and public health institutions. Behind each of them is a search, a clash of interests, the embodiment of hopes and expectations. To recognize that in all this is a particle of your labor as a director is the greatest joy, the greatest reward.

I shall not conceal the fact that I am proud that the association of which I am in charge from year to year, for four five-year plans in a row, has overfulfilled the state plan. I love my work and I do everything in my power to ensure the successful activity of the association and satisfy the needs of the collective.

Of course, labor does not bring only joy. Do you really think that I, the director of a large association, always find the process of decision making pleasant? Believe me, it is not. Can one obtain satisfaction from straightening out all kinds of situations of conflict, from analyzing the causes of accidents, from exhausting and frequently fruitless negotiations regarding submitting railroad cars for unloading the prepared products or the shortage of materials that are extremely necessary for technology? What satisfaction can there be if you are still given the strictest restrictions, beginning with the agencies for state technical supervision and ending with the Society for the Protection of Monuments of History and Culture; but you cannot reduce your labor to a chain of particular affairs that are not coordinated with one another. Beyond the individual trees you must see the panorama of a grand forest.

Two Debuts

Usually a new director is either someone who is advanced from the junior ranks, that is, a person who does not have experience in management work, or a fairly experienced manager, frequently one who has come from another collective. Every debut is characterized by its peculiarities and its specific features.

From my observations, every young specialist (let us say--a potential director), who comes to management work in a production collective can expect a serious crisis. It usually begins with the fact that the young engineer with bewilderment (and somehow suddenly) discovers his almost complete inability to work with people. The profound difference between personal contacts and business relations in a collective is an unexpected discovery for him. With amazement he begins to understand that the same words, requests and orders acquire different meanings, depending on the circumstances. Nobody has told him that confidence can be understood as familiarity, strictness as the shout of an administrator who has overstepped the mark, and an attempt to explain--as confusion or helplessness.

The reasons do not require special analysis. The young specialist is not taught the fundamentals of human relations in the institute. Yet, in order to solve production problems and the daily problems that are inseparably related to them, he absolutely must have socio-psychological and pedagogical knowledge.

The other variant--the arrival of a manager from outside--also has its difficulties. The new manager is forced to display a maximum of initiative and enterprisingness, businesslike qualities and efficiency in administration in order to acquire authority as quickly as possible and justify his appointment. His fresh viewpoint reveals shortcomings and ways of eliminating them better. But he must deal with the fact that the resistance of subordinates to a new face is an inevitable problem which he will have to face in any case. This takes place because of traditions, the ordinary daily conservatism, and possible sympathies or antipathies to the previous manager.

In this case the main thing is not to waste one's energy on trivia. There is no point in emphasizing, especially publicly, the shortcomings of one's predecessor (and, moreover, this behavior is unethical). This produces nothing except unnecessary disorganizing irritation. For the common good, the new manager must find in himself the force, if necessary, to transfer weak workers without being afraid of potential conflicts and temporary deterioration of the psychological climate. He must understand that each day it will be more and more difficult for him to transfer personnel and in the end this path to improving administration will be closed off to him completely or almost completely.

As a rule, the new director requires no less than three years in order to feel confident in his chair. From my personal observations, his activity will progress for another five-six years, reaching a maximum beyond which the given person usually cannot rise because of his purely human qualities. How long this maximum return lasts always depends on the specific individual. But one must consider the fact that the manager who has been in charge of the same collective for many years, regardless of his wishes and desires, deliberately or not, begins to evaluate both his own actions and the behavior of his subordinates from less effective standpoints. He begins to evaluate the blunders of one worker through the prism of past merits and the achievements of another, from the standpoint of his customary shortcomings. Routine appears in the work. Conservatism in thinking and, the most dangerous thing, a sense of the infallibility of his own actions. Naturally, I am expressing a purely personal opinion and do not claim that it is categorical.

The Closest Advisors

The range of possible styles of administration is fairly broad: from absolutely liberal to extremely rigid. True, extreme styles in the work of a manager have been encountered rarely in recent times and have remained only at small enterprises where the professional level of the workers is not high and control on the part of higher organizations and party and social agencies is inadequate.

At enterprises and in associations there are basically two styles of administration: collective and arbitrary, which, as a rule, has nothing in common with liberalism and strictness. Moreover, each year these two styles also, in my opinion, are increasingly losing the clarity of their boundaries and are joining together in a unique combined style of a manager with the prevalence of elements of collectivism. This shows that our administrative structures are approaching the development of a single most efficient style of economic management for the given period of the country's development. At its basis can lie only collective methods of administration, although certain deviations are also possible and even admissible, depending on the human nature, on the features of the character of the given manager and, the main thing, on the existing concrete situations.

The essence of the modern style of the manager consists, apparently, in that all of the significant problems of production, economic and social development of the collective, taking into account their complexity and importance, are brought up for the consideration of a group of competent parties--the board, and in more complicated situations--to the technical council or party-economic aktiv. The developed proposals will be the basis for the director's adopting a final decision which has the force of an order and is compulsory for all workers. From our experience, it is expedient to have such boards meet once a week and technical councils and aktivs--whenever necessary. My work practice shows that this form of development and adoption of decisions is the most efficient. Such a board usually includes the director, his deputies, the head engineer, the head specialists, the chiefs of the leading divisions, the secretary of the party committee, the chairman of the trade-union committee and the secretary of the Komsomol committee. Moreover, the secretary of our party committee and the chairman of the trade-union committee of the association, because of their positions, have the right to "veto" the decisions that are suggested.

The board of the Apatit Production Association consists of 32 of my closest coworkers. Each of them has his merits and shortcomings and his peculiarities of behavior. With some it is enough to give a hint. Those around may not understand what one is talking about, but the director already knows that his instruction has been understood and will be carried out correctly and exactly on time. Others require not only detailed explanations about what the task consists of and the ways of carrying it out, but they must be reminded of it several times.

During the course of a discussion a number of opinions almost always arise, and sometimes they are so polarized that it is difficult to make a final decision at the given moment. In this case, it is necessary to assign a working group from the most competent specialists, and instruct them to figure out the problem that has arisen within a particular period of time and give their opinion at the next meeting of the board. If once again there

is no general opinion, there is no point in considering this issue a third time. Such a problem must be solved by completely different methods. It is the director's duty to find them.

It is a fairly well known recommendation that in contacts with his immediate subordinates the director should not single anybody out and he should certainly not rate one as compared to the way another is rated. But with respect to ratings, I would add this. You should not evaluate a person who is working along with you according to the way he has carried out one task, even a very complicated one. If he has achieved success, possibly, you have exaggerated the complexity of the task, and if he has failed, you begin to wonder if it is possible to carry out the task at all.

Elements of regularity and the systematic nature of his actions are much more significant for evaluation. The subordinate should not forget even the smallest instructions (for then he will efficiently carry out the large ones too), and he must constantly be in a condition of business tension. This is more important than success in one matter, even a very large one. How this is achieved is one of the main tasks of the leader of any labor collective.

One also encounters situations in which the suggestion of the director does not find approval in the collective, and the director does not agree with the opinion expressed by the majority of the members of the board. Each director of a large enterprise must, from time to time, come up against a kind of passive resistance to his undertakings on the part of the specialists.

How does this happen?

If, based on the information, experience, knowledge and intuition available to him, the director thinks that his suggestion is optimal, he must unilaterally make a decision and demand its implementation. At the same time, he must carefully analyze the factors which led to the disagreement between him and the board, and take a critical attitude toward his practical steps.

An extreme case is also possible wherein at the board meeting, when considering an issue that has been raised the director remains completely alone. I think that in this case he must find within himself the power (even if he is confident that he is right) to adopt the decision expressed by the board. If such a case is repeated, the director must think most seriously about retirement, and after a third instance he should resign from his post immediately. He has not been working successfully with the collective.

During the twenty years when I have held the post of director of the Apatit Association, fortunately, I have never reached either the second or the third limit. But I have reached the first limit. I remember this instance.

The board was discussing the question of the jurisdiction of a large complex of the system for recycled water supply in one of the enriching factories in

the Association whose construction had just been completed. Almost all of them were against my suggestion to place the complex under the specialized water supply shop. In spite of the situation that had arisen I still made a decision which went against the opinion of the majority of the members of the board. At that time I was guided by the firm conviction that my suggestion was well founded. It was strengthened even more when I felt in the speeches of some of my colleagues a subjective approach to the matter under consideration. Now, when the complex for recycled water supply is in operation and enough experience has been accumulated, the members of the board, being objective people, have changed their opinion and consider the decision I made to be correct.

When considering the collective style of administration I always proceed, undoubtedly, from the main condition on which the administration of our industry is based--one-man management. In all cases, naturally, the director is personally responsible for the decisions that are made, his own actions and the actions of his subordinates, and all of the consequences of a party, administrative and even criminal nature that ensue from this. Collectivism does not diminish one-man management, but only attaches more weight to it.

The director has in his hands neither the blade of a lathe operator nor the steering wheel of a combine operator nor the brushes of an artist. He has only the right and responsibility to make decisions and to organize and demand their execution. He accomplishes most of his work through the hands of others. And to select these "hands" is his primary responsibility.

When selecting his closest coworkers and entrusting certain parts of the work to them, the director must be guided by the fact that nobody will adopt a more correct or a more rational decision than the worker who is permanently employed in the given area of the work. To ignore this approach and attempt to undermine one's subordinates can lead to difficult consequences.

Up to this day I recall that in the beginning of my work as an economic manager (at that time I was the chief of an enriching factory) I bypassed the division chief and gave instructions to the master to start up one of the ball mills, taking advantage of information from the mechanic to the effect that its repair had been completed. But for various reasons the chief of the division, not having discussed this with the mechanic, ordered that the mill be closed down again and at the time that I issued my instructions, he was inside of it along with two welders. Only the attentiveness of the operator of the mill made it possible to avoid a tragedy. Thus, the fact that the chief of the division and I forgot about an obvious truth almost ended in the death of three people. This incident became a lesson which lasted all my life.

Only a natural disaster or a large emergency, the need to protect the life of people and large material values, gives the director the right to take the necessary measures himself. In all other cases the orders should be given through the corresponding subordinates. And if the subordinates have been selected correctly, they will carry out their duties naturally, without strain or refusal.

Literature concerning administration is filled with the results of research, general considerations and concrete recommendations regarding this issue: how many direct subordinates should a manager have? With a barely perceptible mystical nuance, they speak about the number seven. It seems that the point of departure should be the volume of administrative functions. For it is constant while the number of people who carry out these functions is variable. It depends also on the personal capabilities of the specific people. My experience, in particular, shows that in an association of our profile and scale of production, the director cannot do without twelve-fourteen administrative workers under his direct jurisdiction.

I have fourteen people under my direct jurisdiction: the head engineer, my deputies and assistants, the head economist, the head bookkeeper and the head geologist, the chief of the division for technical control, the chief of the division for control of product quality and labor, and one more division chief. The frequency of job contacts is not the same with all of these managers. Each day I meet only with six or seven immediate subordinates, I meet with two of them two or three times a week, and with the rest of them I meet no more than three or four times a month.

It seems to me that the mental and physical capabilities of each experienced director do not enable him to have daily successful contacts regarding serious issues with more than seven or eight of the managers under his jurisdiction.

All that has been said should by no means be understood as an indication that the director should enclose himself within a narrow group of people. His personal contacts can and should be with a broad group of people, but in no case should these contacts be limited to issuing instructions and orders, but they should be primarily one of the ways of obtaining the necessary information for adopting correct decisions.

More than ten years ago, I had occasion to work with an energetic head engineer. He had a whole number of excellent professional qualities, but he had one peculiarity of behavior--in his actions he easily mixed his own official functions with the functions of the director. He absolutely did not mean to cause harm either to me or to the overall cause. Simply because of his character, the level of his knowledge and his preceding work experience, he preferred the activity of the first manager over that of the head engineer. As the director, it was difficult for me to work with him. Subsequently, having assumed the position of a first manager in another organization, he showed his best side.

For successful work of the administrative staff it is of no small importance for the director to know the individual peculiarities of his immediate subordinates and to be able to encourage their positive traits and neutralize their negative ones. This can be achieved only by constantly analyzing all of the actions and deeds of the subordinates.

in this connection I shall give an example from my own practice. The deputy director G. is distinguished by a feeling of special responsibility for very complicated and painstaking work that is entrusted to him, and perhaps the other managers of the association do not have his organizational capabilities. But for him there is no more difficult task than to skillfully prepare a business letter. I have to remind him several times about the need to prepare one document or another, but then the text of the letter which he has prepared usually has to be significantly changed by me. I understood that by demanding that he carry out a task which is difficult for him I was acting inefficiently and causing harm to the overall business. It was simpler to take this part of the official functions on myself, leaving for him only the preparation of the necessary materials. As soon as I began to do this, everything fell into place.

Another deputy E., in his job resolves a complex of extremely complicated and especially important problems in the area of capital construction. I will say frankly that far from all managers whom I know could cope with these job functions as successfully. Soberly evaluating my own capabilities, I must recognize that I would be a poor manager in his position. But his character has a feature which makes it necessary for me to constantly supervise his work. Striving to solve one problem or another that is related to the start up of complexes for industrial purposes more quickly and, in his opinion, better, he devotes less attention to the construction of nonindustrial facilities. Knowing this shortcoming, I began to take tactful measures to influence him, thus reducing the most undesirable aspects of the activity of E. to a reasonable minimum.

In concluding this section I wish to say that the highest level of the condition of administration of an industrial enterprise is that state of affairs where the entire ramified production organism is controlled as if by itself, that is, without apparent administrative intervention. This is the ideal style of administration which, as I have observed, is not fully achieved at a single one of our enterprises, but toward which one should strive constantly and purposefully. The less the director's external activity is manifested, the better the administration of the organization is usually organized. For a good director everything proceeds as if of its own accord, subordinated to a natural order, to generally known rules which are understood by all. It is precisely on the creation of a measured policy of interrelations with immediate subordinates that the director should concentrate all his efforts. He should undoubtedly devote more attention to this than to current events.

The Director Should Be Able to Do a Great Deal

Regardless of how extensive the collectivity of administration may be, it cannot conceal the indisputable fact that the director is still personally responsible to the state. Therefore in his activity and in decision making he

should be guided primarily by the nationwide goals, should be oriented toward the final state interest, and should provide an example for his subordinates in this. At the same time the director must clearly recall that the decisions he makes almost always contain some risk, which increases along with the circumstances that have indications of danger. One should always be prepared for risks and develop in oneself an intuitive sense that warns against danger.

One should be especially attentive to atypical situations or situations that arise for the first time. As a rule, the majority of decisions whose implementation leads to negative consequences are the result of a careless attitude toward unusual and nonstandard circumstances.

I shall refer to the following case.

Several years ago one of the foreign trade organizations with which we maintain permanent contacts suggested that we conclude an agreement whereby it would pay for part of our products and include them in the annual plan, and it would be as if we accepted them for storage until they were to be delivered in the next year. A similar situation had not been encountered up to this point and there was no appropriate practice.

Not having looked into the suggestion sufficiently, not having studied the instructions and not having sensed the danger, we gave him our consent. It was strictly by chance that the decision we made did not produce unfavorable consequences for us. We could, although not without considerable effort and delay, but still legally, refuse to fulfill the commitments we had made. These complications could have been avoided if, seeing that the situation was atypical, we had been more cautious and devoted more attention to it.

The position of the first manager involves a great deal of responsibility. If the director behaves himself democratically, nothing distinguishes him from his deputies: neither his clothing nor his intonation. But one should not be deceived by this. His position is exceptional and the responsibility and rights he has are not the same as the responsibility and the rights of his assistants, although they are also in positions of high managers.

A manager of any rank must have internal resolve. This is a distinguishing feature of a manager, a necessary feature without which a person cannot be appointed to a management position. As a rule, decisiveness in behavior or a lack of it are noticeable only from outside. It is difficult to judge this in oneself. During my entire life I have encountered only one person who had the courage to draw a distressing conclusion about himself: "I am not suited for management work."

And the situation was this. A young engineer who was appointed to a management position became confused in a complicated emergency situation. The system for pumping water out of the mine had failed. Instead of immediately making the necessary decision and giving strict orders for his subordinates

to carry it out, he began to consult and carry on discussion, which in other, more peaceful circumstances would have been a typical manifestation of the collective style of administration. But in this case time was lost, the water flooded some of the equipment, and emergency became inevitable. It was necessary to spend a good deal of money and time in order to eliminate its consequences.

When the aforementioned situation was analyzed by the commission, the mistake was explained to the young manager, and he understood that he had been wrong. He understood, but he frankly admitted: if something similar were to happen he would act in the same way, that is, he would consult and persuade instead of demanding that an order be fulfilled. He could make a correct decision, but he could not insist on it. Having recognized his helplessness as a manager, the young engineer asked to be transferred to design work. The request was granted and he has been working as a designer ever since. And he works excellently.

Recalling the priority of national economic tasks, the director should direct the work of the collective of which he is in charge in the interest of his own branch and other branches that consume its products. Unfortunately, in real life it is not always possible to follow this rule. I shall use our association as an example. The interests of the branches that produce mineral fertilizers require that we provide for stable deliveries of apatite concentrate for all super phosphate plants of the country. This situation corresponds to the interests of the national economy as a whole. But our regular difficulties in obtaining railroad cars force us, in order to save ourselves, to dispatch our products in excess of the planned volumes for export through the Murmansk port, since here we depend less on the railroad cars. Thus we are forced through our actions to cause harm to our own plants, although if enough railroad cars were available we would undoubtedly serve the interests of our domestic consumers equally. There is a breach: the interests of the association of which one is in charge with its collective of 20,000 prevail over all other interests. Such is life, probably.

To adhere to a consistent policy and not to shy away from promises to relieve all reserves out of a desire to fulfill the plan more easily--these aspects of the activity of the director are based to a considerable degree on his character and his psychological characteristics. Everyone seems to understand that the main thing is the kind of people who are in charge, and not the number of people in management. But still improvement of the system of administration is frequently understood as an expansion of the structure of administration (even if the production structure has remained the same) or an expansion of the possibilities of administrative influences.

This practice has not passed our association by either. In recent years we have organized as part of the administration a division for automated systems for control of production, the division of the head instrument maker and,

finally, the division for control of the quality of products and labor. At the same time, with the exception of the newly introduced fifth mine, not a single new structural production subdivision has appeared in the association. Usually these changes are justified by the growing influence of the scientific and technical revolution. There is undoubtedly some truth in this, but one should keep in mind that one cannot win a battle, even if an army has an excellent staff, if there are not enough combat-ready troops. True, the opposite situation cannot contribute to successful military actions either.

Therefore improvement of the administrative staff which corresponds to the requirements of production should be based not on a mechanical increase in the number of administrative units and frequent redistribution of functions, but on a correct combination of these units with production subdivisions, depending on the nature of production and the difficulty of assignments of the national economic plan.

The work style of the administrative staff is usually a mirror image of the style of the first manager. The most significant vice here is bureaucracy, which is manifested in the most varied forms. It flourishes primarily in places where there is no effective control over the work of the managers either on the part of the higher agencies, or from below, on the part of public organizations and workers. He is a permanent guest in places where they overestimate the possibilities of the administrative staff, and its personnel in particular. Voluntarism and a lack of control are the first and last steps in bureaucracy. Finally, bureaucracy is inevitable in places where they ignore the interests of the workers, forgetting the truth that all administrative agencies are created by them and can exist only as long as they correspond to the interests of the workers.

Eradication of any kind of bureaucracy is one of the most important personal responsibilities of the director, and this should be carried out in close contact with party and other social agencies, and also with the active participation of the workers.

A favorite form of existence of the modern bureaucrat, who has adapted himself to new conditions, is job dishonesty. They usually lie about trivial things. But the sum of the small things turns out to be a significant amount. Therefore the moral harm caused to our social structure by this behavior on the part of certain workers is also great.

We are able to calculate the economic effect and the material damage fairly well. But we have difficulty in evaluating moral damage. Of course, it is very difficult to follow the path along which moral harm passes until it is finally manifested in economic indicators. But it exists and is fairly well trodden; it is just that it is noticed most frequently in extreme cases, when the work collapses completely. But any disease has an incubation period, an unclear form of manifestation. So behind one extreme situation are concealed dozens of almost good situations.

Along with the moral qualities of the director, his professional qualifications are extremely important. He has no right to make a blunder when considering any technical question. It will probably not go unnoticed.

The professional training of a director is characterized by his knowledge of organization and administration of production, his main engineering speciality which he acquired in the VUZ, related specialities, economics and book-keeping. In each of the aforementioned areas he has to deal with professionals who have a narrower range of duties. In comparison with them he is universal, and like anything that is universal, he must know some things better and some things not so well.

Certain authors of works on problems of administration think that the center of gravity of the activity of the manager is now shifting from technical problems to organizational problems. Indeed, such evolution is being observed. But it does not reduce the importance of technical problems for the manager, but only requires additional efforts.

In this question, one can hardly copy to any degree the administrative methods of industrial firms abroad, and particularly in the United States, although individual aspects of them are undoubtedly of practical interest to us. Foreign firms are headed by chairmen of the councils of directors or other managers who usually do not have any special engineering education and are trained as managers in schools for organizers of administration. This approach is explained simply: the main goal of the chairman of the board of directors is to obtain maximum profit and thus maximum dividends for the owners and stockholders of the firms.

But the professional training of a soviet economic manager should be on a higher level and should not be limited only to these requirements. Experience shows that he must be at once an organizer of production, an educator of the collective and a technical leader.

Responsibility for Words and Deeds

Any person must protect his honor. Being true to one's word has always been considered to be an indispensable condition for the behavior of a worthy and honorable person. For the director being true to his word is not only evidence of his honorable and orderly character; it is functionally necessary.

An important condition for the creation of normal interrelations between managers and subordinates is firm confidence of the latter that the manager under any circumstances will keep his promises. Therefore it is always necessary to carefully weigh his capabilities. He need only fail to fulfill a promise once or twice and it can become a habit and lead to serious violations in the system of "chief--subordinate."

Regardless of how strong the character of the manager may be, he cannot do without constant self-control, without the utilization of the number of devices that close off the path to deviations. Personally I have established the habit of not conducting serious conversations with a single person face to face (with the exception of special cases). In my office there must be a third person whose presence disciplines my interlocutor and places additional moral commitments on me personally. A conversation in the presence of a third person makes it unnecessary to clarify subsequently the agreement that has been reached or to fight against rumors and imprecision.

In this question, as in the director's activity in general, one should not so much be guided by the concrete situation as try to adhere to the general rules of administrative activity. The director strictly fulfills his promises not only for the sake of the given concrete instance, but also as a result of the need to adhere to principles. Confidence in his word is a natural supplement to punctuality and precise fulfillment of his duties. Disorder in the actions of the director inevitably leads to the same phenomena first in his deputies, and then in his other subordinates. Individual fragments from above roll down like an avalanche.

The most obvious manifestation of a low level of self-discipline is tardiness of planned measures which is the fault of the manager, especially if they involve a large number of workers. It is better to put off a conference, meeting or other measures until another time than to be even a couple of minutes late in starting them. It is not in vain that they say that punctuality is the courtesy of kings.

Of course there are unexpected causes of an objective nature that force one to fail to meet the earmarked schedule, but an analysis I conducted of my own work showed that in the majority of cases the reasons still lie in an underestimation of self-disciplining factors. Therefore one's own discipline as an indispensable condition for maintaining discipline of one's subordinates should be constantly under special self-supervision by the director. Poor self-discipline which, in the final analysis inevitably leads to a loss of a sense of order and is frequently manifested in attempts to explain blunders in one's own activity and the unsatisfactory work of subordinates.

Once I was an unwilling witness to a conversation which left me with the most painful memory. The director of one of the plants was justifying himself to the deputy minister who, probably with justification, accused him of personal inadequacies which had led to failure to fulfill an additional assignment that had been set by the board of the ministry.

Possibly the director did have certain objective conclusions in his defense, but he arranged it on the basis of accusing the plant's head engineer and his deputy for production. It was difficult to hear this speech which both in content and in form brought no honor to the speaker. The deputy minister is an intelligent and proper person who had traveled a long path in life, and it seemed to me that he also felt extremely awkward and tried to put an end to this scene as quickly as possible.

After that conversation I thought that it was probably very difficult for the subordinates to work with such a manager and that one must assume that matters at this plant would continue in the future to proceed in less than the best way. And in fact soon thereafter in an order for the ministry I read that this unfortunate director had been removed from his post because of regular failure to fulfill not an additional assignment this time, but the state plan.

Such managers cause irreparable harm to the business of education. The training and education of knowledgeable and skillful managers from those who are subordinates is a mandatory and very important task. There are quite a few forms of this kind of education. It is very useful to instruct subordinates to solve serious problems on one's behalf in other organizations. This increases their authority, develops independence and contributes to career growth. One should instruct the worker to inform a higher manager on questions that are within his competence. In addition to eliminating an unnecessary level, in this case the subordinate develops additional internal responsibility since from that moment he begins to see clearly what is experienced by the director who is under strict supervision from above.

The position of the director at an enterprise, like any other high-level manager, is filled with tempting means of making life easier for himself in the most trivial way. He can, for example, make promises and not keep them. For far from everyone will reproach me for not necessarily keeping my word. But a manager who has taken this path gains a false sense of impunity for his words and actions. In the final analysis there is a rupture of the interconnection between the manager and his subordinates, which leads to a loss of authority.

I recall a case in which we ended up to be the party that suffered. At the beginning of the last five-year plan, because of a number of reasons, we raised the question of the subordination of our association directly to the ministry, bypassing the all-union industrial association. The request was considered at various levels, at which various judgments and other suggestions were made. Finally, the manager of the ministry decided in favor of this, having announced it to a fairly large group of individuals. But things did not go beyond this announcement.

I admit that there could have been certain complications when the decision was made, but it was necessary to think of them not after, but before the decision was made. I will say frankly that this case left a fairly unfavorable impression on me. True, it was a good lesson for me and from that standpoint it had positive consequences. I began to be more exacting with respect to promises which I make myself.

Very frequently the reasons for such negative phenomena are not any objective circumstances that arise after a decision has been made, but the lack of elementary self-discipline and self-control on the part of the manager over his actions. Although it is absolutely clear that the manager who does not have a developed sense of his own discipline will never be able to achieve good results.

The same situation can be found when a subordinate tries to avoid responsibility. This is usually clear to the naked eye. One must discuss how obvious these attempts are openly, for purposes of prevention.

I frequently have to straighten out conflicts among workers and shop chiefs, mainly regarding questions of vacations, earnings and transfers to other work. The managers of shops in a number of cases without harm to production could satisfy such requests themselves, and only a subjective approach to them gives rise to conflicts.

It is certainly impossible to satisfy all requests, but refusal can be justified only if it is based on an observance of legislation and existing provisions or if the request causes serious harm to production. There are no other alternatives in resolving situations that involve conflicts.

Being principled is a very important quality of a director. He is constantly being subjected to fairly strong influences both from the higher agencies and from his subordinates who are trying to influence the decisions he makes in a direction that is suitable for them. In this situation the director must have a good deal of courage in order to follow his main line of activity with adherence to principles. Unfortunately, he does not always manage to do this.

Several years ago, our former main board literally forced us to conclude an agreement for many hundreds of thousands of rubles with the Tula branch of the special design bureau under its jurisdiction for the development of automated control systems for technological processes in mining and enriching production. At the end of the first year it became absolutely clear to me and to the head engineer that the firm which had concluded the agreement with us was absolutely incapable of fulfilling the assignments that had been set for it. This initial conclusion was confirmed with all possible clarity in subsequent years.

Naturally, we began to protest against the continuation of contractual relations with this organization, we appealed to the conscience of the managers of the branch, we tried to curtail contractual relations and held up payment of the accounts. In the final analysis the entire matter, in spite of the actually neglected work and the purposeless expenditure of state funds, ended only with correspondence among us, the executives and the main board, and also there was a small moral satisfaction from the copies of these letters that remained with us. The main board turned out to be stronger and our lack of desire to enter into a confrontation with our leaders took the upper hand over a principled approach.

(Conclusion in next issue)

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BIRMAN CRITICAL OF BLIND ADHERENCE TO PHYSICAL VOLUME INDICATORS

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
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[Article by A. M. Birman, doctor of economic sciences (Moscow): "Tons, Pieces and Rubles"]

[Text] In the history of economic science and the practice of management one can easily distinguish alternating periods of enthusiasm for various kinds of indicators. In some cases physical indicators come to the fore and the administration of the economy relies mainly on them and on administrative methods. In other cases value indicators and economic methods of administration of enterprises and branches of the national economy are in the "lead." The former periods include the years of war communism, the first half of the 1930's and the post war years up to the end of the 1950's. The second periods include the time from the beginning of the introduction of the new economic policy until the end of the 1920's, the second half of the 1930's, the 1960's and the first half of the 1970's. Now preference is being given again to physical indicators. Those who defend them point out the fact that during the preceding decade and a half there was a certain fetishization of the role of value indicators. A determining role was assigned to sold products--the value volume indicator. And the role of physical indicators (not denied in words) was in fact reduced. Proponents of physical indicators are making proposals of various levels and scales, and they continue to speak about them. But first let us formulate our main attitude toward physical indicators and their utilization so that it will be clear to the reader what the dispute is about.

Physical indicators (tons, cubic meters, kilowatt-hours, pieces and so forth) are the foundation of economic calculations, planning and the actual process of reproduction, for the national economy needs quite definite material values at the necessary time and in the necessary place. This foundation should be firm. But one cannot live on the foundation. One lives in buildings which are constructed on it. Anyone who intends to live directly on the foundation should not count on cosiness and comfort...

Sources of "Naturopilism"

In his work, "State and Revolution," V. I. Lenin points out that with time the difference between the lowest and highest phase of communism will probably be immense.* "In time"--and this is our time. An underestimation of the differences between the two phases of communism, a rushing forward can cause no small amount of harm.

Why?

Because it ignores the real conditions of the country's economic development, it exaggerates the significance of organizational and administrative forms and methods of managing the development of the national economy, and underestimates the role of economic ones. It seems that planning indicators can directly, without feedback from the sphere of circulation, provide for complete balance in the development of every branch, every region. Hence the underestimation of wholesale trade in means of production, and the incomplete utilization of the possibilities that lie in price setting, finances and credit, control with the ruble when extending credit, and so forth.

At the basis of the argument is a different understanding of the degree of the directly social nature of labor under socialism. Here labor is directly social in nature, but still not completely. Proof of this are both the items which do not satisfy the consumers (and this pertains to means of production as well as objects of consumption), the dispersion of capital investments, and the lack of balance in a number of sections of the national economic plan. There is still complete validity in the words of V. I. Lenin to the effect that monetary circulation is an excellent test of the satisfactoriness of the country's circulation and the abolition of money is a matter which will take many years.**

Labor is still not an organic need for everyone, and therefore it is necessary to have strict commensurability between that which the individual gives the society and that which he receives from it. General Secretary of the CPSU Central Committee, Yu. V. Andropov writes, "The historical experience in real socialism shows that transforming 'my' private property into 'our' common property is not a simple matter. The turnabout in property relations can certainly not be reduced to a one-time act, as the result of which fixed production capital becomes nationwide property. To receive the right to be a master and to become a master--authentic, wise and efficient--are far from the same thing. A nation which has completed a socialist revolution must still for a

*See Lenin, V.I. "Poln. sobr. soch." [Collected Works], Vol 33, p 98.

**Ibid., Vol 43, p 66; Vol 38, p 363.

long time assimilate its new position as the supreme and indivisible owner of all public wealth--this must be assimilated economically and politically and, if you wish, psychologically, developing a collectivist consciousness and behavior. For the only person who is educated in a socialist way is the one who is interested not only in his own labor successes, well-being and authority, but also the affairs of his work comrades, and the labor collective, the interests of the entire country and those of the workers of the entire world."*

But people work in collectives and at enterprises, and therefore they should be compared with respect to the enterprises. In the "Provisions Concerning the State Socialist Enterprise" it is pointed out that the state is not responsible for the commitments of the enterprise, but the latter is responsible for the commitments of the state. In other words, a state enterprise which is based on national property and functions on the basis of a centrally established plan is to a considerable degree a generalized producer, and as we develop the possibility for the collective to manifest initiative expands and should expand even more. This is required by the increasing scale and dynamism of the development of the national economy. The requirement to build and live according to one's means has been formulated, and the branches are changing over from self-repayment to self-financing.

The brief conclusion is as follows: since socialist commercial production exists and there is a law of value, when establishing wholesale prices it is necessary to take into account the objective conditions of production. Thus one cannot allow branches and associations that are planned to operate at a loss, and it is necessary to have approximately the same advantage for the production and sale of the same kind or interchangeable kinds of products. It is necessary to create conditions whereby the enterprise does not run like the devil from new items and progressive technology, but, on the contrary, chases after them.

The requirement for increasing the effectiveness of management and the reliance on intensive factors of development mean that our society needs not material values in general, but those acquired with an optimum of expenditures. One commodity or another is not expensive because there are few of them, but there are few of them because they are expensive--for each unit of final product one spends more than one should of public resources. Thus the quantity of animal husbandry products is influenced, in particular, by the fact that grain is used in pure form for feeding livestock and not in mixed feeds, and the overexpenditure amounts to up to 300 kilogram per ton. Because of the poor technical supply at slaughtering points and the large expenditures on shipping livestock and processing it, the final output of meat is ten percent less than it could be under optimal conditions. When cattle are slaughtered locally, one loses one-third of the valuable substances contained in the animal meat, and so forth.

*Andropov, Yu. V., "The Teachings of Karl Marx and Several Questions of Socialist Construction in the USSR," KOMMUNIST, 1983, No 3, p 12.

The party has named as a key task of management the utilization of the already created potential with the greatest effectiveness. This task cannot be carried out successfully without applications of all value levers: prices, wage systems, bonuses and sanctions, finance and credit--briefly without the introduction of complete autonomous financing in all units of the national economy. Therefore, in our opinion, one cannot agree with the opinion that value indicators play a subordinate role.

The methodological source of "naturophilism" is seen in the lack of desire to pay attention to the scale of the USSR national economy. It is so great that it turns out to have a decisive influence on the variables of the economic mechanism, the principles of its formation and the conditions for its functioning. Let us recall a couple of figures.

There are more than 1.5 million economic enterprises and organizations in the country, and in only one industry there are more than 400 branches and sub-branches. More than 20 million kinds of materials, equipment, instruments and other means of production are used here and more than 12 million kinds of products are manufactured. The number of workers is approaching 130 million.* More than 5 billion documents go through the USSR Gosbank (including savings banks) each year, and the overall number of economic operations during the course of the year is approximately 6.5 trillion.

For some reason many economists and administrators do not take these figures into account when considering problems of the economic mechanism. And therefore the indicators they recommend cannot be directly applied for the same reason that one cannot find the necessary street or house number on a globe which contains the whole world. "And if the scale were smaller," asks the reader who loves precision, "would other economic laws be in effect?" But we are speaking not about laws, but the mechanism for their utilization. Within the framework of a small totality this mechanism, naturally, is quite different. For a simple example, in the AvotZIL Production Association internal autonomous financing is organized differently from the way it is in a firm for repairing watches, although the essence of autonomous financing as an economic category is the same in both cases.

With the current scale of the USSR national economy, everything that is required of an enterprise should be "installed" in those conditions of its daily activity which create the very possibility of the functioning of this enterprise and be established automatically, to a considerable degree, in the given parameters, that is, without special checking and analysis. The reviews conducted each year by the financial agencies can encompass no more than two-three percent of the enterprises and organizations.

Administrative levers cannot be physical amounts since, when characterizing the consumer value, the concrete aspect of labor, they are incomparable. If

*"Narodnoye khozyaystvo SSSR v 1922-1982 gg [The USSR National Economy in 1922-1982], Moscow, "Finansy i statistika", 1983, p 399; p 285.

there has been a certain overexpenditure of kilowatt-hours of electric power but a certain number of tons of material have been saved, this still does not make it possible to draw conclusions even within one enterprise, since it is not known which complete expenditures were needed in order to achieve the savings. And capital investments, expenditures on training personnel and many other things can in no way be reflected in any generalizing physical indicators. All attempts to construct an economic mechanism and administration of the economy which are oriented primarily toward physical indicators are nothing other than a desire to do without money although no one speaks of this directly. It is precisely the "irreducibility" of physical indicators into any unified general indicator that one finds the close link between "naturophilism" and administrative methods of controlling the economy. If plates have disappeared from the stores, include them in the plan. We do the same thing with sheets, spare parts and so forth.

Yet only in the value form, which reflects the abstract side of labor, does everything become comparable. In order to operate, an enterprise must expend means of production and live labor which are consolidated in the indicator of production costs. It receives the necessary monetary funds by selling the products (work). These processes--expenditure and receipt of money--take place automatically in the sense that they require nothing other than the observance of the established time periods, prices and systems of accounting. A violation of conditions is registered here by a lack of money in the bank, and, consequently, the impossibility of continuing the business process. The economic mechanism at this level not only does not reduce the management role of the state in the development of the economy but, on the contrary, increases it since it is not necessary to deal with trivial matters. Instead of particular instructions the state establishes for several years the initial value parameters and exercises, as it were, remote control.

Many economists think that value levers have "not worked," this question is considered below. But let us conclude the present section of this article with a question: if a clock does not indicate the time quite precisely, what should we do: send it in for repair or go back to telling time from the sun?

Primary Orientation Toward Physical Indicators Does Not Solve the Problems

Proponents of physical indicators express various opinions about particulars, but they unanimously deny the expediency of being oriented in the administration of the economy toward value levers and indicators since, in their opinion, there will be rubles and profit but still the necessary products may not be available.

Academician V. M. Glushkov suggested listing in the plan all necessary kinds of products and materials for manufacturing them, and the electronic computer would calculate the optimal process for production and sales. True, he stipulated that without the creation of conditions for motivating the management workers they would not carry out the recommendations of the electronic computer.

Doctor of Economic Sciences, D. V. Valovoy, suggested relying on norm-hours, since they directly reflect expenditures of live labor, and this is precisely what creates the national income. But the author admits that the utilization of this indicator is limited to the performance of identical work, and we add for our part--also under identical conditions. Yet earth-moving work alone has 500 different rates, depending on the category of the ground, the elevation of the area and many other concrete circumstances.

Doctor of Economic Sciences, V. M. Ivanchenko, even more categorically rejects value indicators because of the fact that, in his opinion, they distort the influence of evaluation of the work of the enterprises. The same is true of physical indicators! In his words, a pipe plant must establish indicators in kilograms of weight for linear meter of pipe, simultaneously stipulating the cross section and diameter of the pipes, and so forth. But the author does not mention that there will be millions of these parameters.

Doctor of Economic Sciences, I. M. Syroyezhin, correctly points out that the activity of any economic unit should be oriented toward the final national economic results, and what is necessary to the consumer should be advantageous for the supplier as well. He suggests that quantitative changes which have accumulated in the economy over a number of years have led to a qualitative change which has advanced to the foreground the natural-substantial aspect of production and direct satisfaction of social needs. Therefore priority in evaluating the activity of the enterprise has been given to the fulfillment of delivery commitments. "The entire question is," writes I. M. Syroyezhin, "how to reflect this criterion quantitatively."* Precisely!--we add for our part. I. M. Syroyezhin suggests two methods: for the national economy as a whole (macro level) and for the individual enterprise (micro level), indicating the possibility of combining them subsequently. As an example of the micro level he gives a footwear factory. In order to characterize the five main indicators of its activity (rates of updating of products, expenditures, quality, sanctions and contributions of the collective), it will be necessary to analyze 120 variants of data, which can be done by using ratings of a ranking correlation.

At least two questions arise. How many variants of the data will appear at all the enterprises of the USSR, which produced more than 12 million items? On what basis will the ranks of the correlation be established? If this is on the basis of expert evaluations, how are they better than prices and why should one use physical indicators and not, say, psychological ones? For it is known what different evaluations are given to clothing and footwear by artistic councils and consumers, and the consumer is always right if only because he purchases what he likes.

*Syroyezhin, I., "Managing in a New Way--Reckoning in a New Way," *KOMMUNIST*, 1980, No 14, p 37.

Several years ago this author had occasion to study the economy of the Kharkov electrical machine plant. This enterprise is considered to be highly specialized since it produces essentially one brand of electrical equipment. But it turned out that there are more than 600 varieties of this brand, and several of them differ from one another in terms of sizes, for instance, the Spidola VEF differs from the dumbwaiter...how many variants will there be at this specialized enterprise?

With respect to the macro level, I. M. Syroyezhin suggests a system of dynamic normatives which make it possible, in his words, "to distinguish the millions of variants of the structure of the flow of products and services that are formed in the economy as a whole." Since there is no detailed description of the normatives in the article, it is difficult to talk about them. One is alarmed by two circumstances. The principle used by the author is based on ideal and not real conditions of material and technical supply for the enterprises. Moreover, he warns that the normatives are not suitable for the sphere of circulation which serves the population. But political economics long ago abandoned the idea that only objects of consumption are commodities. Moreover, the requirement to change over to wholesale trade by means of production was formulated in the decisions of party congresses and is still to be implemented, and therefore principally different methods of evaluating activity in the sphere of production and the sphere of circulation are hardly acceptable.

Breaking down the suggestions concerning preferential orientation toward physical indicators and levels of administration of the economy makes it possible, it seems to us, to become convinced that they will not solve the problems. The scale of the economic activity is ignored. Many conventions are introduced which look smooth on paper--but the road runs through ravines!

One can give enough examples of what reliance on physical indicators leads to. In order to save on electric energies some drivers of trains slow down the speed, thus causing harm that is immeasurably greater than the savings. It is downright unpleasant to write about planning machines and elements in tons. There are numerous cases where people drill "for the plan," increase the time en route, and so forth.

We see the solution to the problem in forming an efficient and balanced system of value indicators--from the working position to the Gosplan and the USSR Central Statistical Administration, using the proper number of physical norms, indicators and units of measurement when developing concrete programs for enterprises, material balances of concrete material values, norms of expenditure, and so forth.

Conditions for Effective Functioning of Value Indicators

Under capitalism, prices, interest rates, level of profitability, wage conditions and other economic levers operate while being subordinate to the random course of the process of production and are adapted to market conditions.

Under the conditions of a planned socialist economy, this mechanism for the operation of value levers is precluded. It is unnecessary and impossible. This means that the prerequisites and conditions for the effective functioning of value indicators must also be created under a planned policy. Otherwise they will be distorted and cause irregularities in the operation of the enterprises. We shall limit ourselves to the simplest example. A private entrepreneur will not manufacture products at a loss. The soviet enterprise receives a planning assignment which is mandatory for it. But if the profitability of various kinds of products differs a great deal, the assortment is not provided, and we blame the director of the factory instead of criticizing the committee for prices.

After the decisions of the September (1965) Plenum of the CPSU Central Committee, the role of value indicators in the development of our economy increased significantly. But they still did not produce the effect which was expected and which they could produce. Why?

In the decisions adopted in 1965 concerning improvement of the administration of industry and perfection of the economic mechanism, there was a profoundly thought-out comprehensive system of prerequisites and conditions for bringing economic methods of controlling the national economy to the foreground. It was not "fetishism" of value indicators, but a real accounting for the scale of the economy and a search for elements of the economic mechanism that corresponded to it (this scale) that made it possible to come to this statement of the problem. The discussion was about increasing the balance of the national economic plan, improving material and technical supply, and increasing responsibility for the fulfillment of delivery agreements. Incentives were provided for these requirements by the distribution of profit which remains at the disposal of the enterprise, and the better it operates, the more profit there is. Some of this profit was deposited into the fund for the development of production. All of the aforementioned measures were to be completely supported in the state plan for the development of the national economy with the necessary material and technical resources and the wage fund, and were to be included in the plans for contracting construction and installation work (for construction by the contract method).

Payment for funds was introduced, and the savings as a result of selling part of the fixed and circulating capital were to remain with the enterprise. Prices were to be set as close as possible to the level of planned expenditures on production and thus unevenness in the level of profitability of individual kinds of products was to be reduced. The distribution of profit took on a clear direction; only after satisfying all of the planning needs (including payment for funds, interest on credit and financed payments) was the free residual profit included in the income of the state budget.

Under these conditions the indicator of product sales undoubtedly characterized the enterprise's contribution to the overall national economic "purse."

The merit of this indicator lies, in the first place, in its ability to be consolidated--from the enterprise through the ministry to the entire national economy and, in the second place in its extreme concreteness and clarity: money has either been put into the bank or it has not. This latter circumstance should be especially emphasized, taking into account the scale of the national economy. Here it is not suitable to use indicators which require complicated mathematical calculations for each occasion, for there are many billions of "occasions." Earnings from sales are obvious, as they say, to the naked eye. As a well-known humorist once said, money is like talent: either you have it or you don't...

Is the indicator of product sales the ideal one? No, it has at least three shortcomings.

The first consists in that it can give rise to price increases by the supplier, and with an immense list of items the State Committee for Prices cannot check on all of them. Buyers and consumers should be enlisted to help in this. There are no commercial secrets in our country, and the consumer enterprise can check on the correctness of the established price. Such is the economic path for rectifying errors. But it has not become widespread since all parties have been interested in increasing wholesale prices: the purchaser (it has been easier for him to "assimilate" capital investments that have been allotted), the producer (he need not try as hard to fulfill the sales plan), finance agencies (more income into the budget), and statisticians (they prefer to show high production growth rates). This means that in and of itself the indicator of product sales is not to blame for anything. When changing over to construction with one's own funds and strict observance of normatives for the distribution of profit, the consumer will never agree to overpay.

The second shortcoming of the indicator of product sales is the distortion of the assortment in the race for gaining the advantage. The solution consists in achieving practically equal advantage for all items. We are speaking about identical or interchangeable kinds of items: the higher profitability of manufacturing prepared forms does not lead to a violation of the assortment at a cement plant. And the simplest way of achieving equal advantageousness is by adding an identical percentage of profit to the wages, which characterizes most precisely the expenditures of a given enterprise.

"Excuse me!" they might say to me. "But is this not the indicator of normative net output?!"

Not at all. The normative net output excludes from planning embodied labor which comprises up to 85 percent of the expenditures of industrial enterprises*

*"Narodnoye khozyaystvo SSSR v 1922-1982 gg," Moscow, "Finansy i statistika," 1983, p 178.

and about 60 percent of the gross social product. And this under conditions when economizing on raw materials, processed materials, fuel and electric energy is of vital importance. But we are suggesting establishing an approximately equal level of profitability in the price of the products that are sold.

In a socialist economy there is no law of the average profit norm as an instrument for transferring capital. But the requirement to create approximately equal conditions for enterprises is met here: we have established zonal and calculated prices, monetary accumulations are distributed for profit and turnover tax, and fixed (rent) payments have been introduced. Consequently, by gradually improving price setting it is possible to create equal initial conditions, that is, to set the clocks and not refrain from using them. But the fact that equal advantageousness of items is established gradually does not mean, of course, that this task should be carried out slowly and halfheartedly.

The third shortcoming of the sales indicator consists in that it, like the "gross output indicator," reflects the value of batching items that come from outside and causes more expensive materials to be used. Is cooperation of enterprises and the application of batching items useful? Of course it is, if it is done for the right reasons. One should not fight against cooperation, but encourage it. But one cannot then distort the contribution of each collective to the overall fund!... And why must one judge this contribution according to the indicator of product sales, and not according to the sum of profit that is received? Why can one not say to the collective: you have fulfilled the plan for product sales and have given the country that quantity of material values which was expected of you, and this is good. But your contribution as an individual enterprise is inadequate: the plan for profit was not fulfilled. In the struggle for a precise evaluation of the collective's contribution, one cannot let the main thing recede to the background. What did the national economy receive from the enterprise and did the country become richer because of this? The indicator of product sales and the sum of profit that has been received can answer these questions (when they are utilized correctly).

As for the application of more costly materials, this is opposed by the desire of the manager to reduce production costs and to obtain large profits, and the lack of desire of the consumer to overpay (if he is interested in economical utilization of all of his funds). Even worse than artificial application of costly materials is deliberate utilization of those that are less expensive, but poorer in quality. In machine building, and in particular in instrument building, this measure can be dangerous. But indicators that are abstracted from the cost of materials are pushed toward such a "savings" since profit and incentive funds increase.

Thus we come to the conclusion that value indicators have not justified the expectations not because they do not meet the requirements of the socialist economy, but for reasons that have nothing to do with the essence of these indicators. Let us look at them.

Value indicators work if the enterprise:

is interested in obtaining profit;

can utilize it in areas envisioned by the law;

cannot exist while operating at a loss.

The slightest compromise in these prerequisites weakens the desire to obtain profit and thus the search for and mobilization of internal reserves. To what extent have these conditions been in effect during those fifteen years when value indicators were supposed to have been overestimated?

An enterprise becomes interested in obtaining profit if through profit it can be modernized and expanded and it can improve working conditions. But capital investments have been financed to a considerable degree by the state budget and have not been influenced by the level of current operation of the enterprises, that is, there has been no inevitable dependency between the possibility of expanded reproduction and the effectiveness of current activity. Nor were there stable normatives for forming the fund for the development of production, in many cases this fund was not supported with resources and capacities of contracting organizations, and then it was eliminated altogether: it was included in the overall limit of capital investments.

The situation was approximately the same with two other incentive funds. Their formation became cluttered with a multitude of restrictive conditions, and the sum depended little on increased profitability. The savings received from the sale of some of the fixed and circulating capital was withdrawn into the income of the budget in the overall sum of free residual profit. This residual was in fact not a residual and, moreover, it was not free: it was deposited essentially as an advance, that is, even before the profit was formed during the current month, and the distribution of profit began when the repayment was made instead of being completed at this point.

In trade the budget income includes half of the deductions from profit which are intended for the fund for marking down goods for which there is little demand. Enterprises also deposit here the sum by which the amount of fines that have been received exceeds the amount paid. This alone turned out to be enough for the economic workers not to demand sanctions from one another: mutual "amnesty" was not inexpensive and it is costly to the national economy. As for the possibilities for working at a loss (and frequently this is planned), this exists as a result of adjustments to the plans and the direct establishment of prices that are lower than the level of planned outlays for production and circulation. And this is not only in agriculture.

To Implement the Decree Means to Put Value Levers Into Operation

The decree of the CPSU Central Committee and the USSR Council of Ministers concerning improvement of planning and strengthening of the influence of the economic mechanism on increasing the effectiveness of production and improving the quality of work, which was adopted in July of 1979, envisions the utilization of a ramified system of value levers for influencing the development of the national economy.

A special section of the decree is devoted to the development of autonomous financing and to the strengthening of the role of economic levers and stimuli, and these include the entire system of wages, bonuses and sanctions, prices, financing and credit, and control of the ruble. Normative distribution of profit will be introduced for the part that goes into the income of the state budget and the part that remains at the disposal of the branch. Payments into the budget will be guaranteed, that is, they will be made regardless of the degree of the fulfillment of the plan for profit. The state will no longer take responsibility for deficiencies in the work of the enterprises, which today, when they have failed to fulfill the plan for profit, send explanatory notes instead of the appropriate sum...

Expanded reproduction should be carried out mainly through internal resources and, if necessary, credit; allocations from the state budget are allotted only when these sources are inadequate. In other words, there will be extensive application of the system of self-financing, which has been fully justified in a number of branches of industry and construction, and Glavmosavtotrans.

Bank credit is coming to the foreground in capital construction and financing of branch scientific research institutes. Its principle--reimbursement, promptness, and repayment--essentially increase the control with the ruble. The entire sphere of branch science is being changed over to autonomous financing.

The system of increments and rebates to wholesale prices, depending on the quality category in which the items are included, is becoming exceptionally important for improving product quality, introducing progressive technology and promptly updating items. It has been applied for several years now in the electrical equipment industry and has completely justified itself.

The significance of payments for funds has become greater. Savings on this remain with the enterprise, which will give rise to releasing fixed and circulating capital.

All of the measures listed in the decree for buttressing autonomous financing and strengthening economic levers are quite concrete, are reflected in real monetary relations, and are subject to planning and accounting for each economic operation, they are reflected in the bookkeeping balance and they are irreversibly reflected, with a plus or a minus, in the situation of the enterprise.

Experience convinces us that it is risky to control by means of indicators which are especially constructed and do not exist in daily interrelations among production agents. At enterprises they have learned to calculate the conventional savings, from which not very much goes into the state budget, while the bonuses are issued quite unconditionally. What has been justified in one branch is quite unsuitable in others, and so forth.

But why is the decree of 12 July 1979 being implemented slowly and not always completely, since it corresponds to the demands of life? In our opinion, there are several reasons for this.

We still do not have the proper balance of divisions of the national economic plan, and without this the value mechanism cannot function with the necessary return. Let us recall the words of V. I. Lenin to the effect that with unsatisfactory circulation in the country money can turn into unnecessary paper.* And this is not only a matter of shortcomings in the work of the planning agencies, but also the fact that the existing proportions cannot be changed so simply in the necessary direction. And yet the reasons for skepticism are less than is sometimes thought. Even if it is happening more slowly than we would like, the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 is being introduced. Wholesale prices are being reformed. Prices for agricultural products have been improved. Construction and scientific research institutes will be changed over to a credit basis. The application of the normative method for distributing profit is being expanded.

Let us recall the commitments of labor collectives that were adopted in honor of the 60th anniversary of the founding of the USSR. In what are they reflected? In places where the products are homogeneous--in physical indicators: to extract so many tons of coal in excess of the plan, to ship so many tons of cargo, and so forth. But in the majority of branches there is no possibility of this, and in the commitments it says: "To produce so many thousand (millions) of rubles' worth of products in addition to the plan," "To manufacture a certain sum of consumer goods." I have read about more than one commitment that is expressed in norm-hours or net output.

But why? Because production collectives--practical people--understand that it is necessary to give the national economy something quite definite, material, and clearly tangible, and if this cannot be expressed in tons, pieces or cubic meters, it must be expressed in rubles so that everyone can see what they intend to do for the country.

What has been said does not mean that the matter can be left to itself. The lack of the necessary discipline impeded success in many units of the apparatus. Usually here one has in mind supply enterprises, builders and so forth. But we are speaking about general observance of the norms of economic

*See Lenin, V.I., "Poln. sobr. soch." Vol 43, p 66.

law. Why do people not observe the envisioned stability of norms for the distribution of profit when applying the normative method? Because points pertaining to the formation and utilization of economic incentive funds are not fulfilled? Why are the provisions concerning the state enterprise violated everywhere? Why do we continue to adjust the plan to the detriment of the advanced workers and to the advantage of those who do not work as well? It is possible to continue much longer with this list of various kinds of "whys."

At the November (1982) Plenum of the CPSU Central Committee the question of observance of state discipline was raised quite pointedly. It is obvious that an example should be provided by planning and financial agencies, the Gosplan, the State Committee for Labor and Wages, the State Committee for Prices, and the ministries. Then the enterprises will also pull themselves together and the economic mechanism will make it possible to utilize the innumerable reserves of the country's national economy.

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PLANNING OF HEAVY, TRANSPORT MACHINE BUILDING OUTPUT EXAMINED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 62-71

[Article by N. P. Sidelev, director of the Scientific Research Institute of Economics and Planning of Heavy and Transport Machine Building, A. B. Askerov, chief of the division of branch planning and analysis, candidate of economic sciences, and G. I. Zhurukhin, chief of the laboratory for production planning (Sverdlovsk): "On Indicators for Planning the Most Important Kinds of Products of Heavy and Transport Machine Building"]

[Text] Production assignments are established for associations and enterprises of heavy machine building from a consolidated products list. For example, in mining machine building such equipment as enriching equipment, equipment for mechanizing surface mines and mine-pit equipment is represented by three positions, while the model list of just the first of these consists of 40 titles, and the second--35. We plan large-scale production of equipment with many kinds of items, such as blast furnace, steel smelting, agglomerate, and rolled metal equipment.

In our opinion, consolidated planning has a negative effect on the results of the operation of the enterprises. This is shown also by statistical data: in recent years, with an overall fulfillment of the planned assignments, the plan for the list of products has been fulfilled by approximately 60-75 percent for the ministry as a whole. But expansion of the products list makes it possible to determine more objectively such indicators as price, production costs, and labor-intensiveness, since they are calculated for one kind of item or another and, of course, one can calculate more precisely the generalizing indicator--the volume of sold, commercial and normative net output.

Let us turn to metallurgical equipment--the typical representative of the numerous kinds of industrial products which are typically very different (in the cross section of the assortment) and incommensurable in terms of consumer qualities and labor expenditures for individual items which are included because of their purpose in one group on the products list (position of the plan.)

In the five-year and annual plans for production at all levels of administration the list of this equipment is presented as follows: blast furnace and steel smelting, rolled metal, enriching, coke, and agglomerate. The expansion of the products list here has taken place only "along the horizontal": the five-year assignments have been broken down into annual ones. But in the plans of the enterprises the products lists are unchanged in the sense that at all levels of planning physical indicators of the volume of production of metallurgical equipment are planned in the consolidated form. And although certain items have been placed in individual positions, this does not change the essence of the matter. In the first place they constitute a small proportion (thus in the plan for 1981 the proportion of machines for continuous smelting of billets in the output of rolled metal equipment amounted to 18.1 percent). In the second place, the items that appear repeatedly from the list of those that are placed into individual positions on the products list are not the same in terms of their technical and economic parameters (they have significant design differences, they are incommensurable in terms of labor expenditures, costs, and so forth).

Shortcomings of the Existing Physical and Value Measurements

Physical means of measurement which are used in planning in order to determine the volumes of production of products, as a rule, reflect the physical qualities of the item. And although any physical unit makes it possible to measure only one of its consumer qualities, the possibility of reflecting in the plan the main quality of the products causes extensive application of physical means of measurement.

Another important property of physical means of measurement is the fact that they are convenient for calculating such indicators as labor-intensiveness, production costs and price.

Strictly speaking, the physical means of measurement which are applied do not characterize all of the consumer qualities of the items. Products lists sometimes do not include positions which bring together items that are homogeneous in all parameters. It is known that the greatest commensurability of products is provided in mass and large-series production, but this is practically impossible in small-series and unit production. Here the planning of the output of various kinds of products in terms of a consolidated products list limits the application of physical means of measurement which objectively reflect the consumer qualities of the item.

In five-year and annual plans for the production of metallurgical equipment, the main physical measurement has for a long time been the ton of weight. Its viability as an indicator is understandable: the ton makes it possible to coordinate the volumes of production with material balances and distribution, to compare the volumes among themselves and to break them down as assignments come from the Gosplan to the enterprise, as well as to take into account the final results by simply adding up the tons of products that are produced.

Labor-Intensiveness of 1 Ton of Individual Kinds
of Metallurgical Equipment, Norm-Hours

Production associations	Blast furnace and steel smelting		Rolled metal		Installations for continuous smelting of steel		Agglomerate	
	1979	1980	1979	1980	1979	1980	1979	1980
Uralmash	56	72	79	76	103	90	68	64
Elektro-stal'tyazhmash	106	100	122	108	--	--	--	--

It is known that planning in tons creates motivation for the manufacturing plants to increase the output of relatively nonlabor-intensive items with high metal-intensiveness and does not make it possible to correctly establish the load on the capacities of plants and shops because the methods for calculating production capacities are based on the principle of distribution of labor-intensiveness per ton of weight.

As analysis has shown, the average labor-intensiveness of the production of one ton of each kind of metallurgical equipment differs (see table). The most labor-intensive are metal rolling equipment and installations for continuous smelting of steel (UNRS). The labor-intensiveness of concrete items that are combined according to their purpose into one group on the products list also have considerable deviations from the average value for the given group.

A comparison of the structure of output in tons of metallurgical equipment for the Uralmash association with the structure of labor-intensiveness of the production program shows that the proportion of rolled metal equipment in the labor-intensiveness of the production program is considerably higher than the proportion of the same rolled metal equipment in the structure of output which is calculated in tons. Since mechanical processing of various kinds of metallurgical equipment is done with the same production capacities, the plant, in order to fulfill the plan, must put into production less labor-intensive, but more metal-intensive machines, sets of equipment and components. As a result, for example, Uralmash in recent years has fulfilled the plan for the production of the least labor-intensive blast furnace and steel smelting equipment, but has not provided for the output of rolled metal equipment.

The peculiarities of planning metallurgical equipment for large complexes, technological lines, installations and machines are conditioned by their uniqueness and the duration of the cycle for manufacturing. Thus, rolled

metal equipment delivered by the Uralmash association for the tin shop of the Karaganda Metallurgical Combine consists of several independent technological lines, installations and sets of equipment which, in turn, comprise large sets of technological equipment. Here it is important that each technological line or set of equipment has a strict sequence of assembly. But in all the documents that regulate the production and delivery of metallurgical equipment, the ton of weight is still used to measure volumes. Under these conditions there is a reduction of the role of the plan as a document which determines the final national economic results. Conditions have been created for the manufacturing enterprises which make it possible to use the principle of "varying advantage" when producing metallurgical equipment. Planning in tons gives them the opportunity to maneuver in order to fulfill the plan as well: having changed the sequence of the manufacture of components and sets of equipment, they put into production those that are less labor-intensive, but more material-intensive, not considering the interests of the client.

For example, they did not observe the technological sequence for the installation of equipment when manufacturing the UNRS for the Cherepovets Metallurgical Combine. First they delivered the installation for separating the billets, the accumulator station and the device for lifting the billets, which have low values of the indicator of the normative net output (NChP) per ton--397 rubles, 474 rubles and 548 rubles, respectively, which shows their proportional labor-intensiveness. There was a considerable delay in the pronged sections and the gear, which have a high indicator of NChP: 953 rubles and 2000 rubles, respectively.

The shortcomings of planning production in tons were one of the reasons for changing heavy machine building enterprises over to planning in value indicators. But research shows that there are also significant deficiencies inherent in the value measurement as well. One can include among them:

the poor substantiation of prices which is related to the unsatisfactory condition of the normative base for making calculations;

the utilization as an analog of equipment which was produced five-six years ago and under different production conditions;

the lack of a clear link between the price and consumer properties of the equipment, since the prices are calculated for individual units and sets of equipment which do not reflect the consumer qualities of the complexes as a whole.

Moreover, the utilization of the value indicator as the main one leads to a situation where the enterprises are motivated to establish higher prices for all products. For successful fulfillment of the plan, for commercial (sold) products, it is advantageous to produce costly equipment.

Essential shortcomings are also found in planning the output of lifting and transportation equipment. The differentiation of the list of kinds of crane equipment that is adopted in the production plans does not provide for complete commensurability of machines that are joined together on positions on the list in terms of consumer qualities, material and labor expenditures, and cost. Therefore in planning calculations in practice one uses various average indicators. To do this, for each kind and type of crane in calculations one determines the so-called crane with an average span length.

As an indicator that is used in planning calculations of value volumes of production, one uses the wholesale price of a crane whose span length coincides with or is close to the average span length which is determined by calculation. Consequently, the planned volume for each position on the products list of crane equipment which is established for the associations and enterprises is calculated according to the average cost of a crane. But the actual volume of commercial output is calculated on the basis of the cost of manufacturing the cranes. The utilization of averaged indicators leads to a situation where it is advantageous for the enterprise to manufacture more material-intensive products with reduced labor expenditures. Moreover, when the orders considerably exceed the production capacities, the enterprise regulates the list of products that are produced on its own initiative.

How Can One Plan Heavy Machine Building Output

It is possible to improve the indicators and means of measuring production volumes in several areas.

In the five-year plan, the main indicator for planning metallurgical equipment at all levels of administration, in our opinion, should be "individual units" (technological lines, installations, machines), and the assignments should be distributed among the various years in groups of planned installation jobs. By a group of jobs we mean the part of the technological line (installations, machines) the labor-intensiveness of whose manufacture is limited to one year. The group of jobs provides for technological correctness of assembly.

Metallurgical equipment which is intended for newly constructed or reconstructed facilities should be indicated in the five-year plans in the form of lists of kinds of products for facilities for various purposes, and in the annual plans one should single out the main items and groups of planned installation jobs for the various quarters. As a generalizing indicator in five-year and annual planning for various kinds of equipment one can use the monetary expression--millions of rubles.

The ton of weight can be retained as a calculation indicator when drawing up material balances of production of metallurgical equipment.

When changing over to planning in groups of jobs one must develop catalogues of them which take into account all kinds of metallurgical equipment. The

deciphered list should be drawn up by the USSR Gosplan not for the year, but for a minimum of five-years. The plan for the list of products for each year of the five-year plan should be coordinated for the association (enterprise) with the higher organization at least a year before the planned period with complete balance in terms of material, labor and financial resources, and also in terms of the time periods for providing them.

The Soyuzglavtyazhmash under the USSR Gosplan, in conjunction with supply enterprises, on the basis of five-year plans and orders from client ministries, forms plans for lists of products (sets) for rolled metal equipment and UNRS's two years in advance, and for other kinds of equipment--one year, and coordinates this with the manufacturers. The deadline for drawing up the plan is before 1 February of the year preceding the planned period.

In our opinion, the proposed policy for planning will provide:

plans that are balanced with the demands of the clients for production and deliveries, their sequence, and increased responsibility of manufacturing enterprises for prompt output of specific kinds of products;

the elimination of shortcomings that are brought about by the utilization in planning of the physical ton as well as the value indicator;

conditions for continuous assembly of equipment at the client's establishment, which will make it possible to reduce the time periods for the start up of production capacity;

the creation of prerequisites and conditions for direct long-term economic ties among enterprises on a larger scale.

Now let us turn to the next large group of products produced by heavy machine building clients--crane equipment. The list of these products is differentiated in terms of the kinds and types of lifting equipment. Therefore we are speaking not about expanding the products list, but about the possibility of applying a physical indicator which would provide conditions for equal advantage when manufacturing cranes of the same type which are distinguished by their technical and economic parameters.

A correlational analysis has made it possible to establish a linear dependency between the labor-intensiveness of the manufacture of crane equipment, the material-intensiveness, the wholesale price, the normative net output and the length of the span of the crane. The value of the coefficients of correlation range between 0.95 and 0.99 for practically all of the dependencies that were considered, that is, they are close to 1, and the closest dependency exists between these indicators and indicators of labor-intensiveness.

Suggestions for improving the policy for planning crane equipment basically amount to changing over from the value indicator to the physical indicator. It

"pieces." Here as a standard one uses a crane with an initial span length in a unified series of lengths, and the production volumes with the proposed measurement are determined for each kind of crane with a given lifting capacity in keeping with the established products list.

The volume of output of cranes in conventional physical measurements (conventional pieces) is calculated according to the formula: $AP = AK$, where AP --the volume of production of cranes in pieces, reduced in terms of labor intensiveness, conventional pieces; A --volume of production, pieces; K --coefficient of reduction. The coefficient of reduction is determined by the ratio between the labor-intensiveness of the crane with a span length that has been adopted in the production plan upon coordination with the clients, and the labor-intensiveness of the standard crane (base labor-intensiveness T^b), that is, $K = T/T^b$. Since the volumes of output of cranes reduced to conventional form reflect the differences in the labor-intensiveness of their manufacture (conventional volumes of production of cranes differ from the volumes measured in physical pieces increasingly as labor expenditures increase on the manufacture of cranes with a given span length corresponding to the base labor-intensiveness), it becomes equally advantageous when fulfilling the plan for the enterprise to produce crane equipment with various degrees of labor-intensiveness.

In recent years significant changes have taken place in the structure of enriching equipment and equipment for mechanization of surface mines and yards around shafts. There is an increased proportion of complicated new elements which are more labor-intensive and more complicated in their operation with other equipment.

The present system of planning production, which is based on the physical ton of weight, does not motivate the manufacturing plants or their design surfaces to reduce the proportion of these products and, as a result, to save on metal, or to supply the equipment with semiautomated and automated systems. The production capacities for producing this equipment are also calculated in physical tons, and with a constant updating of the products list and with an expansion of the output of the latest highly productive, but lighter machines, the capabilities of the enterprises are not reflected correctly.

Planning only in physical tons, without singling out individual kinds of machines and aggregates, leads to a situation where the plants must manufacture equipment without taking into account its complexity and labor-intensiveness, and the time periods and volumes of delivery of equipment on the products list cannot be controlled.

In order for it to be advantageous for the manufacturing enterprises to create machines with higher technical and economic indicators and reduced metal-intensiveness, it is necessary to reject planning in physical tons. But in order to improve the indicators of planning of enriching equipment and equipment for mechanization of surface mines and yards around shafts, it is also necessary to change over to planning equipment in a developed products list in pieces, and the generalizing indicator should be the value indicator--millions of rubles.

In our opinion, it is also important to revise the indicators for planning stationary belt conveyors (with a rubber belt). Today the assignments for their outputs are established in pieces with a distribution among the groups depending on the width of the belt, but without taking into account the length of the conveyor. Such planning does not make it possible to evaluate correctly the load of the manufacturing enterprise or to objectively characterize the metal-intensiveness or labor-intensiveness of the item, since within one group the conveyors can have the same width of the belt but can have the most varied lengths. The average length of a conveyor differs from year to year while the level accepted for establishing the norms for expenditure of materials remains the same.

Since the indicators which characterize the material-intensiveness and labor-intensiveness of the manufacture of a stationary belt conveyor are its breadth in millimeters and length in linear meters, it would be expedient to plan the overall volume of output of these conveyors in thousands of linear meters, distributing them among the groups which are used at the present time and characterize the width of the conveyor, and pieces should be excluded as units of measurement.

Thus we see the possibility of improving the planning of the production of heavy machine building products in the utilization of physical indicators, along with expansion of the products list. In order to draw up the material balances and determine the necessary material resources, it is necessary to retain the ton as a calculating indicator. The generalizing indicator for each kind of equipment can be millions of rubles. Thus conditions will be created for an economic analysis of the plan and the level of its fulfillment as well as the determination of the growth rates of the volumes of the output of commercial products.

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EXPERTS POINT OUT MANAGEMENT PROBLEMS IN SCIENCE SECTOR

Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)*
in Russian No 9, Sep 83 pp 72-87

[Article by B. S. Sokolov, academician, academic secretary of the Division of Geology, Geophysics and Geochemistry of the USSR Academy of Sciences, and N. F. Raymers, doctor of biological sciences, Central Economics and Mathematics Institute of the USSR Academy of Sciences (Moscow): "Effective Forms of Control of Science"]

[Text] In our day the framework of individual sciences into which scientific knowledge breaks down cannot precisely define the area of scientific thought of the researcher or precisely characterize his scientific work. The problems which engage him are increasingly going beyond the framework of an individual, particular, already existing science. We specialize not in sciences, but in problems.

V. I. Vernadskiy

Is the Main Motive Force of Intensification Developing Intensively?

In science, as in other kinds of activity, it is necessary to achieve a changeover from the extensive to the intensive type of development in the shortest possible period of time. The goal of control of the development of science is to make sure that the result of scientific creativity increases more rapidly than do expenditures on science. "Science, unfortunately, has still not suggested to practical work the necessary solutions to a number of important problems which correspond to the principles and conditions of developed socialism," noted Comrade Yu. V. Andropov at the July (1983) Plenum of the CPSU Central Committee.

This demanding evaluation places very serious responsibilities both on any scientific subdivisions and on certain principles of the organization of scientific work.

Let us recall the dynamics of the growth of scientific personnel. The number of scientific workers increased eight-fold from 1950 through 1980 and candidates of sciences--8.7-fold, but the numbers of doctors of sciences increased

only 4.5-fold. In 1950 the ratio between doctors and candidates of sciences and people who do not have a degree amounted to roughly 1:5:20, and in 1980--1:10:36. In spite of the increased allocations for science, the allocations for the work of one scientific worker remained practically unchanged during this period.

Intensification in complicated systems like that of science require a more clear-cut hierarchy of subsystems. At the present time in domestic science the classical system (fundamental science--applied research--industrial developments) has considerably eroded away. Academic science, as a rule, gives recommendations directly to management agencies, bypassing the lower levels of the hierarchy--applied science institutes and developers. In a number of cases the latter are not directly involved in fundamental sciences, and sometimes even ignore them. In turn, fundamental science must form "its own" applied science and "its own" production capacities, which make it possible to bring fundamental results to the point of completed technologies and items, some of which--instruments, equipment and preparations--are necessary for fundamental research. In the majority of cases there are no legally established institutions which directly organize and control research processes in applied science.

The deconcentration of scientific work bears witness to its extensive development. Frequently small groups of scientific associates work in one area, but separately, in their own departments, divisions of the Academy of Sciences, and institutes. Sometimes even in the same subdivision of an institute developers who are working on the same problem do not have communications with one another, they duplicate the research of other workers, and so forth.

For example, problems of the so-called preserve work (organization of especially protected territories and so forth) are being worked on by at least five institutions in Moscow. The number of workers who are engaged in this subject ranges in each of the institutes from one to nine, and the average is three-four people. Correspondingly the funds are also dispersed.

The existing coordination plans, which in the area of science join together dozens and sometimes hundreds of institutions, are in fact not effective enough since they do not clearly define the forces, funds and time limits allotted to each worker. And the leading organization is not an organizational head which has greater authority than the rest of the institutions.

Since it does not distribute funds and does not control scientific forces, the leading organization is unable to reinforce those units of the coordinated plan which in some stage of the work end up without workers or material resources. The network of the coordinated plan ends up with "holes" without a system, and the special-purpose program principle is not realized.

Let us turn our attention to another weakness in the anatomy of modern science--the lack of correspondence of the hierarchies of informal and formal

structure. The hierarchy of informal levels of the organization of science can be conventionally arranged in the form of the following series: individual scientists--association of scientists of the same school--the scientific school--the problem association--the sphere of branch activity--the scientific discipline--the branch of knowledge--science as a whole. The formal organizational hierarchy in the USSR Academy of Sciences has the form: worker--group (sector)--laboratory--division--division of the institute--the institute--division of the Academy of Sciences--section of the Academy of Sciences--presidium of the Academy of Sciences--national science--science of the CEMA countries--world science. Somewhere between the seventh and ninth levels of the hierarchy one should include departmental scientific subdivisions and associations. Only the initial and final units coincide in these two series. Informal group goals can fail to coincide with formal ones, and the administrative leader, say, the director of the institute, is certainly not necessarily the head of the scientific school to which the workers of the institution belong. The essential divergence between the formally prescribed and informally realized goals is an important factor which impedes the course of research. But a number of cases it is only this divergence that has made it possible to breach the wall of lack of recognition of certain special scientific areas.*

There have been widespread attempts to create some kind of combined structure in the form of scientific and scientific-technical councils of various ranks and jurisdiction. But these councils are doomed to inaction a priori since many of them include the same people, the majority of whom are not able even to remember the number of councils of which they are members, not to mention participate in their work. The councils do not have the funds for conducting research, and therefore at their meetings one can only consider the final results of research. The very number of councils is so great that, for example, the Division of General Biology of the USSR Academy of Sciences was forced to create a commission for coordinating the activity of councils that consider questions of environmental protection.

There have been successful attempts to organize enthusiasts into closely interacting collectives like the clubs for scientific interests. These are either sections of scientific councils or associations attached to magazines ('round tables') which are permanent or, more frequently, one-time operations. These associations are useful for an exchange of opinions and to some degree they structure the lower levels of the network of informal scientific ties. But under the conditions of the exceptionally large load on the leading scientists with current work and participation in a number of conferences, councils and so forth, it is difficult to keep up the enthusiasm of the main mass of participants who frequently carry out only their own particular tasks.

Complete coincidence is practically impossible, and it is also actually harmful, just as an extreme divergence of the formal and informal structures of the organization of the control of science is.

Scientific subdivisions (institutes, divisions, laboratories) are a type of organization where there exists a central member of the society (manager, board of directors, scientific council), and the rest depend on him and are closely related to one another in terms of all of the most important resources. But in scientific subdivisions as well material and financial interrelations among elements of this rank are frequently lost since the number and volume of assignments usually exceeds the financial, personnel and other capabilities of the institution.

Personnel and Results

The lion's share of monetary funds of institutes goes to pay staff wages, with a small proportion of expenditures on scientific equipment. In the USSR Academy of Sciences, with the exception of individual institutions, expenditures on research are much less than on the wages for the workers, who frequently end up in the position of unique "unwilling pensioners" who are forced only to process the information that has been obtained previously, but not to develop new masses of information and put it into circulation. Far from everyone has the capability of successfully processing secondary information into new knowledge. From the study of science it is known that in any country the "intellectual ballast" comprises up to 75 percent,* and no more than one-fourth of the scientific workers are able to create new knowledge. With the existing limitations on funds and the shortcomings in the organization of research, this proportion becomes even smaller.

One must say that increasing the proportion of female candidates and doctors of sciences contributes to reducing the number of people who acquire new knowledge. In 1950 they comprised 7.2 percent of the overall number of doctors and 25.0 percent of the candidates of sciences, and in 1980 these proportions became 13.8 and 28.0 percent, respectively. We are not saying anything offensive when we assert that in science women usually fulfill the important role of "foot soldiers" who consolidate successes that have already been achieved, but not "tank battalions for breaking through." Psychologists and science experts have established that "rebelliousness," the striving to find non-traditional paths of development is more typical of men than of women. Therefore the extensive feminization of science leads to a detailization of research, with a certain retardation of the development of new areas of knowledge.

*It is very harmful to present the matter in such a way that in order to eliminate this ballast one wants immediately to reduce the staffs of scientific institutions. The proportion of "ballast" does not decrease with any variant since it is the result of the systemic condition of science. Only better supply and effective organization of research work can increase its productivity.

An essential problem in intensification of scientific creativity is the disparity between the measure of difficulty and the results of the labor of the researcher, on the one hand and the measure of remuneration, on the other. Earnings reflect to a certain degree results that have been previously achieved by the scientist and his potential capabilities. But since at any given moment this depends only on the position, the degree and the work tenure, and not on the actual difficulty of the labor or the importance and the results of the research, earnings cease to be a stimulator of creative activity. As a result, the scientist who has achieved a certain position is allowed to regulate the difficulty of his labor, within an exceptionally broad range. And for one part of the researchers recreation and all kinds of remunerations essentially exceed labor expenditures, for the more active group of scientists it becomes typical to work until they are worn out. But in the final analysis, working too hard and not working hard enough are both disadvantageous to the society.

The significant underutilization of the intellectual potential is related to the poor provision of the leading scientific workers with technical means and especially the inadequate assistance for them on the part of scientific and technical personnel. Even a senior scientific associate usually does not have a laboratory assistant and a stenographer assigned to him. He is transformed into his own laboratory assistant and becomes "his own messenger." It should be noted for the sake of fairness that frequently even when assistants are available they do not produce much because of the lack of monetary funds for searching for original new data. As a result, that small proportion of researchers which constitutes the real aktiv of science cannot realize more than half of its scientific possibilities. In the area of academic science with which the authors are most familiar, because of the aforementioned reasons, only an insignificant proportion of the scientific potential is realized.

The main areas of administrative efforts in science seem obvious to us. They are:

the creation of a clear-cut hierarchy of scientific subdivisions on the basis of the system approach;

the elimination of unjustified departmentalism;

the creation of more durable interdisciplinary ties;

the orientation of scientific institutions toward problems;

the provision of scientific councils with allocations and other resources;

the transfer to leading scientific organizations of real funds for administration "along the horizontal" (that is, within the framework of the inter-departmental problem) and granting them the necessary legal authority;

efficient financing of scientific subdivisions and individual scientific workers, supplying them with technical equipment and assistants, and so forth.

In order to take advantage of these possibilities it is necessary to have adequate forms of organization of administration. They can probably not be the same for all spheres of scientific activity. But the expedition method of administration can be advantageous for investigating problems of the utilization of nature (the activity closest to us).

The Expedition Method and Solving Problems of the Utilization of Nature

The expedition method makes it possible to control scientific research effectively. Recall that during an age of significant advancement or, conversely, during difficult organizational periods of the country's development, domestic science has always extensively utilized comprehensive special-purpose expeditions. An example of this is the activity of such institutions as the Permanent Commission for the Study of Natural Productive Forces of the USSR (1920's), the Council for the Study of Productive Forces (1940's-1950's), and the expeditions just before the organization of the Siberian branch of the USSR Academy of Sciences (for example, before the creation of the Institute of Geography of Siberia and the Far East of the Siberian Branch of the USSR Academy of Sciences, the Central Siberian Lower Taiga Expedition was functioning with the Angaro-Lena, Angaro-Ilim and other large detachments). A large role in the development of geological study of the country in the 1930's and 1950's was played by the closely interrelated regional academic, branch and VUZ expeditions, which encompassed practically all of the territory of the country. Because of them we managed to provide essentially all of the details on the geological map and to conduct geological prospecting on such a large scale that it outpaced the development of industry, and a basis was laid for scientific predictions of the extraction of mineral raw material.

Unfortunately, in the 1960's and especially in the 1970's, the scale of expedition research, with the exception of geological prospecting, decreased considerably. A number of permanent establishments were eliminated. The reduced influx of original materials makes it impossible to hope for a quick achievement of qualitatively new degrees of awareness about the earth's core, the patterns of origin and concentration of minerals, the interaction of the spheres of the earth, the peculiarities of the functioning of the biosphere, and large ecological and geological systems of the planet.

New information can be acquired most efficiently not with uncoordinated work, say, of geological institutes (there are about 100 of them in the USSR), but during the course of joint, centralized expedition research which is well coordinated scientifically and methodologically and in terms of resources.

The expeditionary form of organization of scientific research has a number of advantages:

problem organization of research work makes it possible to adjust goals and maneuver personnel, which are difficult to achieve with other forms of organization;

the interdisciplinary nature of the work which requires a comprehensive approach makes it possible with the expeditionary form to achieve high concentration of forces and funds in the leading areas of the work;

the staff of the main workers of the expedition can be augmented for varying periods and at the necessary time with researchers in the required area, who are paid remuneration in the form of nonstaff earnings* and field benefits (additional payment for additional labor);

the worker volunteers to enter an expeditionary collective, and the leader of the expedition, in turn, can accept or reject the services of a worker who has already been accepted. Especially favorable conditions are created for selecting talented youth. Consequently, the goals of the organization and individual informal goals can be coordinated well;

the fact that the work involves traveling makes it possible for the manager to consolidate the collective and direct it toward the achievement of goals which are common to all;

the specific nature of the work brings about direct familiarity of the researchers with the object of their study and makes it impossible to adopt an abstract office style of work;

the dynamism of expeditionary associations makes it possible to maintain for a long time the maximum effectiveness of the work of the collective (the greatest return in collectives that are stabilized in terms of goal and organization, as we know, comes in the fourth or fifth year of joint work, and then it decreases).

The advantages of the expeditionary method of research listed above as well as a number of others, as the calculations and work experience of the authors show, make it possible to reduce proportional expenditures on the development of concrete issues by half, and sometimes even more. The main advantage arises as a result of the reduction of the time periods for carrying out the work, and also the proportion of wages in the overall expenditures. This advantage more than covers all the additional expeditionary expenditures.

The expeditionary form of organization of scientific organization in the area of utilization of nature, which is similar to the formation of project-"teams"

*Since the middle of the 1950's financial agencies have been creating more and more limitations on the payment of nonstaff wages to scientific and scientific-technical workers, which has made it much more difficult to draw them from other institutions. In general the legal provisions in the area of expeditionary work are extremely confused, and trivia literally bind the leaders by the hands and legs. In particular, it is necessary to have radical improvement of legal norms that regulate the combining of jobs. This issue is especially critical for the organization of expeditions.

which have been adopted abroad, makes it possible to bring the lower levels closer to the informal and administrative hierarchy, to create a "bridge" between fundamental and applied research, and to organize concentrated resource support for the collectives that are working on the most crucial problems. This coordinates cooperative and centralized forms of control of science, making it possible to structure the coordinated plans more efficiently in keeping with the common goal.

The expeditionary structure is more rigid in implementing decisions than is the ordinary scientific research organization. The head of the expedition or detachment is a kind of "captain" on an expeditionary "ship." The leaders of expeditions can organize work in such a way that losses of intellectual potential are minimal; for instance, without any coordination he can immediately provide the leading workers with technical equipment, assistants and so forth.

The effectiveness of the expeditionary organization of labor also increases because of the fact that specialists of various profiles are needed when solving complex problems at various stages of the research and by various dates. Some of them are sometimes required literally for a couple of days. Sometimes the specialists are enlisted only as consultants. It is not economically justifiable to include them on the staff, but the lack of them frequently retards the investigatory process. An expeditionary organization is more dynamic, which produces a great advantage in time and in the efficiency of the research.

The authors' work experience shows that scientific research in the area of the utilization of nature accelerates with the expeditionary form of organization and control and its effectiveness increases four-five-fold as compared to typical forms. It should be noted that this experience was certainly not acquired under the most optimal conditions, but rather, on the contrary, it was impeded by organizational, financial and personnel difficulties. Under more favorable conditions, the effectiveness of the expeditionary method of work can increase the results of the usual structure of scientific research on the utilization of nature. In this sphere it is possible at least to double the results of intellectual labor.

Expeditions and Special-Purpose Programs

For the most important problems related to the utilization of nature, in our opinion, one should organize several comprehensive interdepartmental expeditions on a unionwide scale. They could resolve the following fundamental problems.

1. The maintenance and optimization of the ecological balance on land and in the water basins through improving the utilization of land and other kinds

of economic activity. Now the overall losses (effect that is not achieved) from inefficient land utilization and imbalance in the economy reach 35-40 billion rubles, according to expert estimates.*

2. The development of the aspects of the long-term food program that have to do with nature.

3. The consideration of ecological problems of the formation of a long-range energy program, taking into account a probable changeover to new energy sources.

4. The creation of a unionwide integrated cadastre of natural resources, including mineral resources, on the basis of their comprehensive evaluation and cartography, which is not only retrospective, but also prognosticatory. The new program for large-scale geological study of the territory of the USSR needs a comprehensive expeditionary superstructure.**

5. The development of the ecological sections of the program for further urbanization of the USSR and standards of the "ideal city" for various climate zones of the USSR. Here one can also use foreign experience. In Great Britain, for example, they have constructed more than 30 "city-gardens." Many countries, especially Sweden, are working on planning "cities of the future" and implementing these plans.

6. Maintenance and improvement of the population. Now the insufficiently thought-out demographic and migrational policy and the incomplete balance of the spheres of production and service, including the organization of recreation, and also other omissions have caused the country to lose, according to certain expert estimates, from fifteen to twenty billion rubles,*** not including social and other kinds of noneconomic harm.

The aforementioned special-purpose programs and subprograms for which expeditionary methods of research can be effective are on many levels. Thus, for example, it is already clear that in order to restore and maintain the ecological balance of the Azov Sea, not enough measures are being taken in its water area or throughout its entire basin. It is precisely the many levels and the large scale that make the expeditionary method irreplaceable for solving the aforementioned problems.

*Fedorenko, N. P., Lemeshev, M. Ya., Reymers, N. F., "The Socio-Economic Effectiveness of the Protection of Nature," PRIRODA, 1980, No 10, pp 2-13.

**Adopted by the USSR Ministry of Geology in May, 1982.

*** Fedorenko, N.P., Lemeshev, M. Ya., Reymers, N. F., "The Socio-Economic Effectiveness of the Protection of Nature," PRIRODA, 1980, No 10, p 6.

The scale of the problems is immense. This will require concentrated efforts of a multitude of institutions and thousands of scientists for at least two-three five-year plans. It is necessary to travel the path from the selection of general concepts to large-scale experiments. It is also necessary to prepare for possible partial failures and a lack of understanding on the part of certain economic leaders and leaders of scientific institutions, and other difficulties like this.

The principles of the work of expeditions are sufficiently clear and have been tested by many years of practice. Initially one develops the general contours of the special-purpose program. Then within its boundaries one selects the leading units for which preliminary models of a solution are drawn up. Here preference is given to the most economical variants. On the basis of the system that is developed one conducts purposive two-three-variant "pilot" research projects, during the course of which one makes adjustments both to the algorithm for conducting the work and to the initial models, which are usually gradually becoming more complex. After the selection of a generally balanced variant, it is profoundly developed "on location" (usually at permanent facilities, which can also be local scientific research units) and it undergoes experimental production or multifaceted model testing. This makes it possible to give recommendations that are not only scientifically substantiated, but also verified in practice. The work of the expedition as such usually ends here, and there remains only the "accompanying" group--expert-consultants who render assistance to design, planning and economic agencies in introducing the results that have been achieved into practice. Some workers begin to work on new programs with expeditionary research while others return to their basic jobs outside the expedition.

The departmental and monodisciplinary nature of episodic expeditionary research projects is an impediment in the modern stage of development of science. It is necessary to reach a principally new level in the control of expeditionary projects which provides for effective interdisciplinary and interdepartmental interactions. The Division of Geology, Geophysics and Geochemistry of the USSR Academy of Sciences, the divisions of earth sciences of the union republics, the Siberian Branch of the USSR Academy of Sciences, and scientific centers of the academy could take the initiative in organizing the initial nucleus of the interdepartmental center for expeditionary research. But it is necessary to have effective support from the ministries and departments of the country. This nucleus, with the participation of other divisions of the USSR Academy of Sciences, could be transformed into a powerful comprehensive center which is capable of solving the aforementioned and other large-scale problems.

We are convinced that the creation of an interdepartmental center of expeditionary research which has sufficient material resources would make it possible even under existing conditions, without special trouble to solve relatively rapidly the many stirring economic problems and to considerably intensify the scientific process in the area of the utilization of nature.

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RURAL MANPOWER RESOURCES FOR AGRICULTURAL, URBAN SECTORS

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 89-90

[Introduction to articles that follow: "Rural Labor Resources--To Both the Country and the City"]

[Text] From the moment of their appearance up to this day the cities have been drawing the scarce labor resources from rural areas. This process does not take place painlessly everywhere. One of its consequences is a shortage of personnel in rural areas, especially during the agricultural season. As a reaction to this, there is mass patronage assistance from city dwellers, without which even a region like Central Asia, which is well supplied with labor resources, cannot do.

How does one "reconcile" the interests of the three parties: industry, striving to attract additional workers as cheaply as possible, agriculture, which is no less interested in retaining personnel who are so necessary during the season, and rural residents, who wish to live in rural areas and work in industrial production? In this connection it is very important to have skillful regulation of nonagricultural employment of the rural population, and such forms of this as labor pendulum migration and rural industry.

According to calculations of specialists, up to fifteen percent of the country's rural population has been enlisted in pendulum migration. This is especially intensive in the Baltic states, the Ukraine, Belorussia and the European part of the RSFSR. Rural industry is gathering force: enterprises are creating their branches in regions which have labor resources, and kolkhozes are opening up industrial shops. In the Food Program, in the section entitled "Improvement of Social and Domestic Conditions for Life in Rural Areas," it is emphasized that "In order to provide for year-around employment of kolkhoz and sovkhov workers, the farms should develop, where it is expedient, subsidiary productions and industries, and also production cooperation with industrial enterprises."

Which of the forms--pendulum migration or rural industry--should be given preference when solving problems of efficient utilization of rural labor resources? This depends on concrete conditions. Local agencies of authority

can in some villages stimulate pendulum labor migration, for instance, by improving passenger transportation, and in others they can reduce it, by creating new industrial jobs directly at the place of residence. Each of these forms has its strong and weak points and its problems. These will be discussed below.

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LABOR-SHORT CITIES DRAW ON COMMUTER WORKERS FROM COUNTRY

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 90-95

[Article by M. I. Kenigshteyn, group leader of the Lvov division of the Institute of Economics of the Ukrainian SSR Academy of Sciences: "The City and Commuters"]

[Text] A customary detail in the urban landscape is a bulletin board with announcements: "Needed..." Where does the enterprise acquire additional labor force? One of the sources is residents of nearby villages, so-called pendulum migrants. For example, in certain large plants of Lvov the proportion of suburban residents in the composition of the workers ranges from 25 percent (the bus plant) to 50 percent (the Konveyer Production Association). In general in the cities of the Western Ukraine, commuting is especially intensive. According to data from an investigation of the USSR Central Statistical Administration, as of 1 July 1981, out of every 1000 workers and employees who are employed in cities of the republic, there are about 100 commuters and in Ivano-Frankovsk, Transcarpathian, Chernovtsy and Lvov Oblasts-- 357, 304, 252 and 190, respectively.

The need for additional labor force is the most critical in branches that determine technical progress--machine building and metal processing, electric energy, the chemical industry, and so forth. Intra- and interbranch distribution of the labor force leads to a situation where the vacancies are mainly those with the least favorable working conditions and the least skilled work. As a rule, these are also filled by commuters. It is typical that their level of general and specialized training is lower than that of those who remain in the rural areas. But when working at a large industrial enterprise, the rural worker cannot but perceive the more advanced art of production and labor organization, which is reflected in his general cultural level and way of life. Moreover, the city offers great possibilities of improving education and acquiring a profession.

Investigation of the level of skills of suburban workers who are working at enterprises of such large cities as Lvov and Kiev has shown that two-thirds of them are workers in the mass occupations of categories 1-3. And this is

quite explainable. On the one hand, the enterprise tries to provide residential space as close to the job as possible primarily for highly skilled specialists and workers and, on the other hand, it is not economically advantageous for auxiliary and subsidiary workers who earn less than the rest to come each day from distant regions. Subsidiary workers and students also participate in commuter work, but they are drawn most to smaller cities. Thus in the small cities of Lvov and Transcarpathian Oblasts (true, taking into account workers of categories 1-2) they compose 74-86 percent of all the commuters. Engineering and technical personnel also commute, but their proportion is not great.

The city not only draws the labor force it needs from rural areas, but also determines its occupational-skill, sex and age structure, adapting it to its own needs. Actually, each production typically has its own age structure of employees. In heavy machine building, in particular, it is necessary to have more young workers. The city frequently cannot satisfy this requirement and so rural areas come to the rescue. In general most of the commuters are youth, which retards the aging of the labor resources in large cities. Lvov, for example, 66 percent of all the suburban workers are less than 35 years of age, and in industry this proportion is even higher. Youth are more mobile, are less tired out by the traveling, and have a favorable time budget.

The distance between the place of residence and the job gives rise to especially critical problems for commuters. In Lvov Oblast 75-90 percent of the commuters use special buses. In cases where the scheduled arrivals of the buses and the shifts at the enterprise do not coincide, which happens frequently, the workers arrive at the plant long before the beginning of the working day (19 percent of those questioned regularly wait 30 minutes until the beginning of the shift) or they are late. And after it is over they again must wait for their bus (26 percent waste another half hour or more on this).

In other oblasts, for example Transcarpathian, the people who live in villages come to work, as a rule, on plant buses. It would seem that they have better conditions. But this is only true for those who live on the main highways--and the rest of them have to find their own way to the main route. At best this takes 20 minutes (in only one direction). Usually there are not enough plant buses to simultaneously bring in (and take home) all those who desire this, and therefore they transport primarily residents of the more distant villages, and after work they transport first those who live nearby. And here is what happens: the farther away you live, the more time you spend, and not only on travel, but also on waiting...

From the table, one can see that a commuter spends an average of about two and a half hours each day en route from home to work and back. This amount of time increases to three hours if the people work in a large city. There is also this pattern: with an increase in the "mass" of the combined nucleus, its attractive force increases, the zones where commuters live become more distant, and the time spent on travel to work also increases.

Daily Expenditures of Time of Commuters of Lvov and Transcarpathian
Oblasts From Home to Work and Back, % of Those Questioned

Kinds of expenditures	Up to 10 min.	10-20 min.	20-30 min.	30-40 min.	More than 40 min.	Average weighted time expenditures per 1 worker, minutes
Home-bus stop	48	27	10	6	9	17
Waiting for transportation	37	44	12	4	3	15
Travel time	7	23	28	17	25	29
Waiting for beginning of shift	31	32	18	9.5	9.5	20
Waiting for transportation after shift	12	30	32	14	12	24
Transportation-home	4	16	22	20	38	37
Total						142

Setting out on such a long journey each day, sacrificing a large part of their free time and, to some degree, their health, commuters hope that in the city they will be able to raise their social status and their occupational-skill level. But the conditions in which they end up, because of objective (and also subjective) reasons, far from always meet their demands. The unfavorable conditions for labor, life and recreation at the enterprise are perceived negatively by all workers. But when they are intermingled with the problems that are specific for the commuters, their negative influence increases. Indeed, if the showers at the plant are working poorly, this is experienced much more acutely by workers who do not have municipal facilities at home. The forced idle time of equipment and the losses of time that are related to this, like overtime work, cause a more negative reaction the more time that is spent each day on the road.

Specialists think that for a worker who has spent more than an hour on the road labor productivity decreases by 10-15 percent--this is a manifestation of transportation fatigue. According to data of the Lvov trade-union council, injuries and diseases of commuters are five-six times greater than for city residents. Research on commuting in other regions has produced similar conclusions.

The aforementioned problems, perhaps, explain the fact that labor turnover among commuters is twice as great as among "stationary" workers.

Managers of enterprises usually regard increased turnover of commuters, their tardiness and their failure to appear at work, and their low labor productivity as inevitable outlays, a kind of payment for these working hands which are so necessary. But does there have to be such a high price which is paid for "commuting" by the enterprises, on the one hand, and by the workers themselves, on the other?

The answer is even more important since the daily flows of traffic of workers between settlements are becoming customary for millions of people, a norm of life, an element of the way of life. Unfortunately, the criteria of the economic effectiveness of commuting are still among the least investigated problems. But in any case the need for a differentiated approach to this category of workers in the comprehensive socio-economic plan of the enterprise is already obvious. As planning indicators one can use, for example, the proportion of commuters in the overall number of workers, the proportion of those who are brought to work by departmental transportation, the average weighted time expenditures on traveling, and so forth. One should think about developing a system for their occupational and skilled growth at the enterprise and expand the possibilities of intraplant transfers which, as experience shows, essentially reduces the number of personnel who leave the plant.

In rayon planning it is necessary to take into account the formation of zones with regular commuting with an optimal radius of mass settlement of suburban workers. The development and building up of these zones requires a great deal of attention. It should become the norm to develop regional comprehensive programs that eliminate inefficient forms of labor movement of the population. It is necessary to have scientifically substantiated recommendations for transferring to permanent work a certain part of the commuters, especially those who must make long trips each day. Questionnaires show that many are trying to live in the city, but at the same time there are more and more of those who do not wish to leave rural areas: they are attracted by the proximity of nature, the farmstead plot, the fresh air and the quiet. If only passenger transportation operated more efficiently, if only there were more buses and electric trollies. With further improvement of the material well-being and increased production of passenger vehicles one could expect that there would be a larger role for private transportation in the daily trips to work (today only one percent of those questioned use their own vehicles). Thus trips which are inefficient from the standpoint of the expenditures of nonworking time will become efficient for some of the commuters.

One can understand the lack of enthusiasm of transportation workers and urban construction workers who are trying to measure and organize the large commuter passenger flows, and one can sympathize with city administrative agencies which are trying in some way to integrate into the urban structures those

"temporary city dwellers" without harm to the permanent population. One can completely understand the negative attitude of the planning and statistical agencies, for whom it would be much simpler to account for a less mobile population. But still one cannot ignore the fact that the intensiveness of commuting is increasing in many regions of the country.

In the materials of the 26th CPSU Congress it is emphasized that "...Under the conditions of the 1980's it becomes especially important to take a thrifty, economical attitude toward labor resources. This is a complicated matter which requires the solution to many problems of an economic, technical, social and educational nature." What has been said applies fully to commuting to work as well.

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ECONOMIST DESCRIBES AVERAGE RURAL COMMUTER

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 96-100

[Article by V. A. Kalmyk, candidate of economic sciences, Institute of Economics and Organization of Industrial Production of the Siberian Branch of the USSR Academy of Sciences (Novosibirsk): "The Social Portrait of the Commuter"]

[Text] With the growth of cities and the improvement of transportation there is a larger group of villages in Western Siberia whose residents work at city enterprises. Not only the suburbs, but many peripheral villages have been drawn into the orbit of commuting. During the 1970's the number of commuters in this region increased by one-third. Many years of socio-statistical research among rural residents of Novosibirsk Oblast are representative of the region as a whole, and therefore they make it possible to draw a social portrait of the Siberian commuter.

Commuters...Who Are They and Why Are They Drawn to the City?

The majority of commuters are young people with a fairly high level of education. They can not always find work in rural areas which is in keeping with their inclinations and their speciality. Sociologists note a close link between the level of education and the desire to continue to study. The portion of those who combine work with study among commuters is twice as great as among those who have remained in rural areas. It would seem that it would be possible to study in an evening or correspondence VUZ and still live in a rural area. But this significantly narrows the possibility of selecting a specialty since it is difficult and sometimes impossible to find in rural areas work which is close to the profile of study. And evening students are also hampered by the irregular schedule of the working day. Thus, every eight out of ten commuters work seven-eight hours a day while for rural workers the working days are broken up. One can partially satisfy the need of rural youth for education by expanding the list of specialties in the specialized vocational and technical school. The fact is that in the future the needs of rural enterprises for workers of a nonagricultural profile, especially in the sphere of service, will increase sharply. Training in rural areas will provide them with personnel and somewhat reduce the migration of youth.

It is thought that private subsidiary farms keep the commuters in rural areas. This assertion is incorrect for Western Siberia. Many rural residents who work in the city, especially those who have a high level of education and a broad circle of needs, prefer not to keep a private subsidiary farm. They bring most of their groceries from the city and they devote their free time to other occupations that are preferable to them, and in particular they continue their education. One must say that they spend less time caring for children than rural workers do because their families, as a rule, have few or no children.

Daily trips to work in the city serve as a kind of pivot around which various kinds of activity are arranged and which gives a specific, mobile way of life, which is somewhere between rural and urban. The structure of time expenditures of young rural women who work in the city and in the country can be seen from the data in Table 1.

Table 1.

Time Budget for Summer Day of Young Rural
Women Who Work in the City and Country

Kinds of time expenditures	In the city	In the country
Work at enterprise, organization	8.8	7.2
Travel to place of work and back	1.5	0.7
Work on private subsidiary farm	0.3	1.7
Housework	1.3	2.3
Care for children and time spent with them	0.4	1.2
Free time, total	2.4	2.0
Including:		
For education	0.4	0.1
Communication with friends and acquaintances	0.5	0.4
Physiological needs	9.3	8.7
Other expenditures	--	0.2

Up to this point we have been speaking about youth. Older people are less persistent in the role of the commuter. In addition to work in their specialty, they want to find in the city employment that is physically less taxing

but with sufficiently high earnings. Thus among rural residents who work in the city the number of workers with average monthly earnings with 150-200 rubles is 40 percent greater than among those who work in rural areas.

People of prepension and pension age also go from the country to work in the city, although there are not very many of them. These trips are burdensome for the majority of them. They are motivated by a search for working conditions which correspond to the condition of their health, and also by the desire to receive a larger pension.

Further improvement of working conditions in rural areas, expansion of the sphere of nonagricultural production, improvement of the pension system for rural residents, and reduction of the difference in the level of their earnings as compared to those of city dwellers will lead first of all to a reduction of the number of commuters of older ages, including prepension and pension aged commuters.

Thus the motivations for commuting are the most varied. Such factors as the burdens of the private subsidiary farm, the unsatisfactory service for the rural population and the lack of anonymity in rural life are playing an increasing role. Almost half of the commuters wish to live in rural areas, and one-third wish to live in the city (the proportion of rural workers who prefer to live in the city is half as great). For many, work in the city is compulsory. Moreover, older people frequently still cannot adapt to city working conditions, especially in industry. These people are oriented toward a rural way of life.

Where Do Commuters Work?

The opinion is widespread that rural areas send to the city mainly less skilled labor force. This is not typical of Western Siberia. In this region there is a multitude of the most varied job vacancies. The high educational level of the majority of commuters makes it possible for them to perform skilled work. The majority of the commuters are workers in industry, construction, education, public health and accounting and planning occupations. The range of industrial and construction occupations is extremely broad. These include electricians, electrical installers, machine tool operators, stamp operators, forge operators, welders, repairmen, painters, plasterers, joiners and carpenters. As agriculture is industrialized and the construction of enterprises and institutions for serving the population expands, these occupations will occupy a stable position in rural areas as well, and it will be necessary to have skilled young workers. This does not mean, of course, that they are not needed today--the scale of the need will simply change.

There are half as many managers and specialists among the commuters as there are among people working in rural areas, and twice as many nonspecialist employees (see Table 2.)

Skill and Position Composition of Rural Residents, %

Table 2.

Structure	Commuters		Rural Workers	
	1972	1977	1972	1977
Managers and specialists	9	9	18	17
Employees--nonspecialists	10	21	5	11
Workers in main occupations	48	59	57	56
Unskilled laborers and junior service personnel	33	11	20	16

From 1972 through 1977 the proportion of commuters employed in unskilled labor dropped to one-third the previous level, and the proportion of nonspecialist employees (mainly women) more than doubled. The fact that specialists prefer to remain in rural areas is explained primarily by the introduction of certain privileges and benefits for them. On the whole the structure of employment of commuters in cities is becoming increasingly progressive.

The image of the rural resident who works in the city shows how commuting smooths out the differences between the rural and urban ways of life. The rural residents are receiving more social benefits, but they receive them sometimes at a higher price (loses of time en route to work and back, fatigue, reduction of labor productivity, difficulties in adapting to the urban environment, weakening of family ties, and so forth). And from the standpoint of the economic interests of rural areas, the commuters are just as cut off as are people who have left the rural areas for good.

Although the scale of commuting "from the country to the city" is increasing absolutely, the rates of this growth have decreased under the 10th Five-Year Plan in Western Siberia and in the country as a whole. This is related to a considerable degree to the fact that the natural growth of able bodied population in the cities has increased, and also to the fact that the rural way of life is becoming increasingly attractive. But the deterioration of the demographic situation in the 1980's can raise a wave of commuting even to the detriment of the interests of agriculture. The problem of effective regulation of the volume, direction and composition of the migration flows is becoming more critical. In order to avoid causing harm to agricultural labor, the rural resident must not only be given the freedom to choose his place of work, but it is also necessary to make the rural jobs more competitive by improving the conditions and organization of labor. This is the only socially acceptable way of influencing the choice with which many rural workers are faced.

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OPTIMAL USE OF SEASONAL LABOR PROPOSED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 100-106

[Article by D. V. Chernykh, head designer of the Siberian branch of the Tekhnergokhimprom Scientific Production Association: "Interseasonal Labor Reserves: How to Use Them?"]

[Text] Paradoxical situations are possible in the social sphere. Thus, labor resources can "coexist" with a shortage of them, if the forms for drawing them into production are ineffective.

In the press they are actively discussing the possibility and ways of mobilizing such reserves as those employed in public production who wish to work by combining occupations in time when they are not doing their basic work: pensioners who can work part-time; students who wish to earn extra money during evening or at night; and housewives who would like to work part-time or work at home. For effective utilization of these reserves, especially in the sphere of material production, it is necessary to have not only legal and economic stimuli, but also jobs with special conditions and work situations, and herein, perhaps, lies the main difficulty.

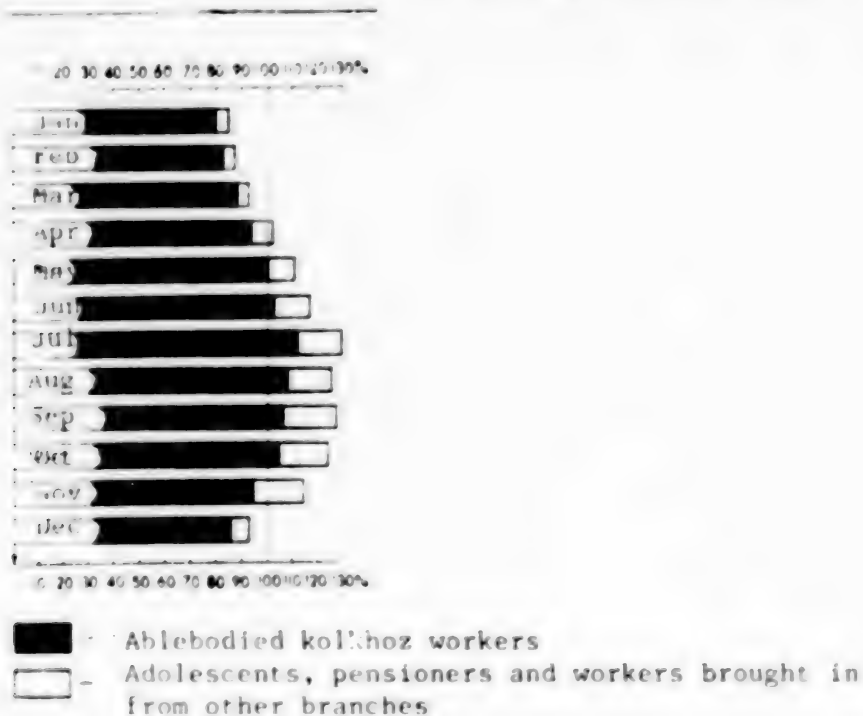
There is one more source which, as a rule, escapes public attention. We are speaking about the interseasonal reserve of labor in the branches with seasonal production such as agriculture, fishing and forestry (including procuring the "gifts of nature" and industrial hunting), the timber, sugar and fruit and vegetable processing industry, river transportation, and rural, road and land reclamation construction. Of these, agriculture is the branch that employs the largest number of seasonal workers.

How Rural Labor Resources Are Used

Agriculture has always tried to eliminate the seasonal fluctuations in employment. The multibranch structure of production on the majority of kolkhozes and sovkhozes contributes to this (the peak of work in pasture and stabling animal husbandry does not coincide with this peak in crop growing), the repair

of agricultural equipment (this occupied the majority of machine operators all winter) and the processing of their own products (this is developing actively, particularly on Moldavian kolkhozes and sovkhoses of the Ministry of the Fruit and Vegetable Industry). Nonetheless we have not managed to compensate fully for the seasonal nature of the work, and industrialization of poultry and hog raising, which practically excludes seasonal work in these branches, only exacerbates the situation on other kinds of farms.

One can gain an idea of the scale of seasonal fluctuations in employment for which there is no compensation from the statistical reports for the kolkhozes (see diagram). As we can see, during the season, the able-bodied kolkhoz workers are greatly overworked, in spite of assistance from adolescents, pensioners and workers brought in from other branches. And then during the interseasonal period on an average for the country, fifteen percent of the able-bodied kolkhoz workers are not employed in public production. for the sovkhoses the interseasonal labor reserves are somewhat less, and they differ for individual natural and climatic zones. In agriculture as a whole the interseasonal labor reserve, according to our estimates, amounts to 12 percent of the permanently employed people. In other words, we are speaking about several millions of average annual workers which agriculture itself cannot use.



Time Actually Worked on Kolkhozes of the USSR Ministry of Agriculture in 1980. Normative Supply of Working Time of Able-Bodied Kolkhoz Workers--100%

And so, labor resources are located in rural areas. On the one hand, it is difficult to take them from there since the basis of the rural population is comprised of those who do not intend to leave the rural areas and, on the other, this is disadvantageous since they are critically needed by agriculture itself during the season. Therefore the jobs must be located "at the place of residence," that is, thousands of small productions (for 50-200 workers) should be created in villages, and it should be possible to close them down during the agricultural season without special harm.

As analysis shows, labor resources in rural areas can be utilized most advantageously in labor-intensive technological processes of the processing industry--they do not require highly skilled employees, costly equipment or large shipments of raw and processed materials. These conditions are also satisfied by operations of assembling components of electrical and radio electronic equipment, the production of uncomplicated household electrical items, consumer goods from the assortment of "1000 small items," accessories, certain technological processes in light industry, and so forth. Thus close cooperation is created between rural industrial productions and city enterprises. What should their economic forms be?

Rural Branches of a Plant

Industrial enterprises construct branches in rural areas, supply them with equipment, gather workers from the local population and train them. They pay a large part of the expenses for the creation of jobs in rural areas, but they also receive all the profit from their functioning. The cost of products in rural branches, of course, is higher than at the head plant, as a result of the small scale of production and transportation expenditures, but on the whole they are advantageous to the enterprises: by transferring labor-intensive operations to rural shops, the plant reduces its own labor shortage and turnover, without bearing expenses for the social and domestic infrastructure for new workers.* Moreover, the kolkhozes and sovkhoses on whose territory the branches are located find this disadvantageous since they operate according to the schedule of the head plant, and this means that workers employed in them cannot participate in harvesting the crop (except during vacation). At the same time, all expenditures for development of the non-production sphere for these industrial workers are paid by the kolkhozes and sovkhoses. In other words, while easing the shortage of labor in the city, the branches aggravate it in rural areas, where it is crucial in any case during the harvest season.

Industrial Shops of the Kolkhoz

These shops are well-known in the Baltic area, more and more of them are appearing in the Ukraine, and they exist in other republics. For example,

*According to our research, in the electrical equipment industry the losses of the enterprise when one person is dismissed amount to an average of 1,000 rubles.

the kolkhoz imeni V. I. Lenin in Alma-Ata Oblast has concluded agreements for cooperation with several industrial enterprises of Alma-Ata and has organized more than ten industrial shops, including five sewing shops (they produce fur items and women's and children's clothing), two plastics shops (they provide Alma-Ata enterprises with parts for radio electronic equipment) and several mechanics shops (they manufacture hardware). Semimanufactured products and raw materials are delivered by the cooperating enterprises, and these and the final product are transported by automotive transportation both of the enterprise and of the kolkhoz (during the interseason). During the agricultural season the shops are closed and the kolkhoz workers work in agricultural production.

The utilization of the income which the kolkhoz receives from industrial shops is especially interesting. The organizer of the industrial production on the kolkhoz, the inventor N. F. Zhalybin, specialized some of the shops (which were constructed, incidentally, with income from the others) in "clothing and metal" various inventions for agriculture--both his own and of his two sons who are also inventors. Thus one of the mechanics shops produces rolled metal of special profiles for bearing structures of the famous Zhalybin hot houses, and one of the plastics shops produces plastic for these hot houses. That is, the income from industry goes for the development and updating of fixed production capital in agriculture not directly, but through technical re-equipment, which increases the effectiveness of its utilization.

One could object that the Kolkhoz imeni Lenin is an exceptional case, since not every kolkhoz has its own inventors. But even without this the industrial shops, obviously, are advantageous for the kolkhozes. They are also advantageous for the industrial enterprises, in spite of the fact that they have to arrange additional warehouse capacities for adapting to the seasonal rhythm of the work of the kolkhoz shops. For practically all of the expenditures on creating the new jobs are paid by the kolkhoz! This makes it possible to regard the kolkhoz industrial shop as the most expedient method of utilizing the interseasonal reserve of labor in agriculture.

But only the kolkhozes are capable of creating their own industry. The fact is that a suggestion of the board is given legal force by a decision of the general meeting of the kolkhoz workers, but a decision of the board of directors of a sovkhos acquires this force only after approval from the higher level. Thus, if a sovkhos constructs an industrial shop on its own initiative, the supervisory agencies can legitimately regard it as a violation of financial discipline. And, finally, the profit obtained from the industrial shop will be disposed of not by the sovkhos, but again by the higher administrative level. Therefore, there are practically no industrial shops on sovkhoses if one does not include the processing of agricultural products. Apparently, in order to utilize the interseasonal labor reserve on the sovkhoses it is necessary to have some other forms of cooperation with industry--they still have to be developed and experimentally tested. These could possibly be something similar to the compensatory contract: the industrial enterprise constructs an industrial shop for the sovkhos, and the latter pays for this with products.

Possible Consequences

Any large change in the distribution of productive forces (and mass creation of industry in rural areas will undoubtedly cause such a change) involves different consequences.

First of all one should expect that rural industry will offer an alternative those rural residents, who are not satisfied with labor in agriculture, and some of the potential migrants and also a considerable proportion of commuters will take advantage of this alternative. On the other hand, the distribution of rural industry will obviously depend on the development of the highway network, and therefore it will probably not involve rural villages. It is also understandable that the scale of the influence of agricultural production on the economy of each region is determined by the amount of the interseasonal labor reserve.

The consequences for industry: in those branches of the processing industry which "move" into rural areas, there is a sharp increase in the proportion of small and extremely small productions that cooperate closely with large ones. The positive role of small productions in industry has already been considered in EKO,² and therefore we shall note only the main thing for the consumers--the expansion of the assortment of small-series products. Large enterprises, having transferred to rural shops the labor-intensive operations or kinds of products, receive an additional opportunity to expand production, having reduced labor-intensiveness, that is, to reduce the labor shortage and labor turnover. But the overall labor-intensiveness in these branches can even increase as a result of the increased labor-intensiveness in rural industries.

Consequences for the city: the reduction of resettlement and commuting from the country to the city will lead to a relative reduction of the load on the urban social and domestic infrastructure. The scale of this reduction, incidentally, should not be overestimated. Additionally, there will be an increase in the shortage of labor in those branches which today have a large proportion of resettled workers and commuters--these include construction, municipal services and other infrastructural branches, that is, not at all those which enter into production cooperation with rural industry. In turn, with an aggravation of the shortage, there could possibly be a more extensive utilization of urban labor reserves--these were discussed above. And, finally, there will be a certain reduction of the number of city dwellers who are enlisted for harvesting work.

The consequences for agriculture: the main advantage for the kolkhozes and sovkhoses from industrial shops is the reinforcement of labor resources and, as a result of this, increased labor productivity: as we know, local residents work better than city dwellers do in the same agricultural jobs. The profit from the industrial shops can go for increasing the capital availability for agricultural production, which will contribute to the implementation

²"Small Enterprises--Large Possibilities," EKO, 1979, No 9.

of the Food Program. Additionally, the high (as compared to agriculture) profitability of industrial production can in individual cases draw so many managers away from agricultural enterprises that in their awareness the basic and subsidiary enterprises will change places. Cases like this are known, for example, in Transcarpathia. True, these pertain to industries in general and not agricultural industry in the strict sense of the word.*

Consequences for the village: they will perhaps be the greatest. First of all there will be a sharp reduction in the social difference between the city and country with respect to the diversity and quality of places for the application of labor. As a result of the earnings of the people employed in industrial shops, the incomes of rural residents will approach the incomes of city dwellers. The demographic structure of the rural population will improve in those regions where it has been disturbed. This, in turn, will create conditions for normalization of the reproduction of the population. On the other hand, there will be a stronger process of eliminating "remote" villages, since the attraction of the "foreward-looking" villages will increase as industry is located in them.

Rural industry is very promising, although it is not all the same in terms of the consequences of the alternative to commuting. It could possibly help to solve the problem of efficient utilization of rural labor resources. How will events develop? It is extremely doubtful that one of these tendencies will completely win over the other. Most likely both will prevail in various places, depending on the situation.

*Rubinov, A., "Artists and Hack Workers," LITERATURNAYA GAZETA, 10 February 1982.

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PRODUCTION OF CONSUMER ITEMS BY KOLKHOZES ENCOURAGED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 107-111

[Article by K. K. Khalaim, chief of the agricultural section of the editorial staff of the newspaper L'VOVSKAYA PRAVDA: "The Kolkhozes are Producing... Television Sets"]

[Text] On the 50 farms of Lvov and Transcarpathian Oblasts about 70 shops have been created, which involve direct cooperation with industrial enterprises. Each year they produce approximately 30 million rubles' worth of such products as radio and electrical equipment parts, components, small metal and plastic items, cardboard, paper and wood packaging--in a word, products that do not require complicated equipment but require a good deal of manual labor.

In September 1981 the USSR State Committee for Labor and Wages adopted the decree, "On the Work Experience of Kolkhozes and Industrial Enterprises in Lvov and Transcarpathian Oblasts and the Utilization of Rural Labor Resources During Time That Is Free From Field Work." It recommends that the republic committees for labor and wages in conjunction with agricultural agencies, taking into account the concrete conditions and without harm to the development of agriculture, in all ways contribute to production cooperation between agricultural and industrial enterprises. The cooperation will be used primarily for producing additional consumer goods, and also goods for production purposes with a simultaneous steady development of agricultural production.

Participating actively in the cooperation are the Elektron, L'vovsel'khomash, Mikropryor and Elektrobytprior production associations, the plant for electric lighting equipment, the insulation plant, the Progress footwear association, the Lvov hosiery factory and others. Individual kolkhoz shops also produce products that are necessary for agriculture--polyethylene containers, drainage couplings, special clothing, and so forth.

How do shops with direct cooperation differ from other kolkhoz subsidiary industries? Frequently one has occasion to hear: "If the kolkhozes engage in the production of local construction materials and produce canned goods, the next thing will be television sets..." Well the production of brick and lime

in the kolkhozes is increasing. They are very necessary for rural construction. And there is no doubt about the expediency of creating canning plants and processing fruits and vegetables locally. But one should not forget that both brick and canning plants operate seasonally, and they need a good deal of labor force precisely during the summer when there is a shortage of it on the kolkhozes.

Many kolkhozes have arranged the production of various consumer goods and souvenir items. The rhythm of their work is perhaps even more advantageous for agriculture than for shops that are involved in direct cooperation with industry. For example, on the Progress Kolkhoz in Yavorovskiy Rayon, the shop for producing paint brushes completely closes up for the three summer months.

There arises the question: from what does one produce consumer goods? One can find vines for weaving baskets, for instance, on many farms. But the list of goods that can be made from available raw materials is not very long. Much more frequently the raw material must be acquired by hook or by crook... The situation is simpler with respect to raw materials for souvenirs. But souvenir shops need artistic guidance. In places where this does not exist it is better not to begin at all.

Let us return to the question of the utilization of labor force. Today more than 80,000 workers come from the villages each day to Lvov alone. Branches of industrial enterprises in rayon centers, small cities and villages where there is a surplus of labor force make it possible to reduce the intensiveness of commuting. But the kolkhozes are not interested in sharing their youth with them. It is more advantageous for them if the rural residents work in rural areas: in an industrial shop, on a farm, on a tractor brigade, and so forth.

One must say that the production cooperation of the kolkhozes and enterprises increases the effectiveness of the utilization of labor resources in the region as a whole. Judge for yourselves: because of the low level of organization and the poor motivation, labor productivity among city dwellers who come to the fields is approximately 40 percent less than that of kolkhoz workers. It is no wonder that each year tens of thousands of workers are brought from the cities to do agricultural work! But the labor productivity of workers in industrial shops of the kolkhozes is the same as that of the kolkhoz workers who work permanently in the fields. It is not necessary to teach them to dig potatoes, to weed sugar beets or to mow hay. When it rains they work in the shops, and when it stops they go back out into the fields. The kolkhozes that have industrial shops, as a rule, do not need patronage assistance.

The Priukordannik Kolkhoz in Transcarpathian Oblast in 1978 concluded with the Lvov Mikropribor production association an agreement for producing laboratory tables and transformers for a sum of 2 million rubles. The kolkhoz turned a

building with an overall area of 1,750 square meters into a production shop, constructed an administration building and auxiliary premises, and the association delivered the necessary equipment to be rented. The personnel were trained on time: all the kolkhoz workers who desire to work in the shop took three-month courses at the head enterprise of the association. The kolkhoz paid for the training. The shop employees about 300 people and they work on two shifts.

The output norms, the wages and the bonuses for the workers in the shop were established in keeping with similar indicators of the head plant, and the norms for expenditure of raw materials are on a level with those that are in effect in industry. The quality of the products that are produced is inspected directly in the shop by the division for technical control of the Mikropribor association since they are sold under its brand name.

In 1979 the Prikordonnik kolkhoz used raw material from the association to produce more than 2.5 million rubles worth of industrial products, which made it possible for Mikropribor to essentially increase the output of products without increasing the number of workers or expanding the production areas.

Such production cooperation is also advantageous for the kolkhoz. The level of employment of the kolkhoz workers in 1979, as compared to the maximum possible supply of their working time, amounted to 87 percent, while on an average for the kolkhozes of the oblast it was equal to 67 percent. Overcoming the seasonal nature of the utilization of labor resources contributed to retaining youth on the kolkhoz. The kolkhoz was able to refrain completely from enlisting city dwellers for agricultural work while before the creation of the shop up to 150 people came each day from the city of Vinogradovo to harvest vegetables. The shop workers are assigned areas for raising tobacco and feed sugar beets in an amount of 0.15-0.20 hectares per person. In 1979 each of them, in addition to producing 9,200 rubles worth of industrial products, raised 2,000 rubles worth of agricultural products.

The profit obtained from the sale of products from this shop goes primarily for production, cultural-domestic and housing construction, and for the acquisition of agricultural machines and supplies.

There are many similar positive examples. But, unfortunately, the development of direct cooperation between kolkhozes and enterprises is still proceeding randomly. A shop frequently originates this way: the chairman of the kolkhoz meets with the director of the plant, they agree between themselves, and that is all. There is no standard agreement for cooperation or norms for the staff register, and the plans do not envision material and technical supply for the shops. Sometimes the kolkhoz cannot acquire some machine tool that is necessary, and the plant has a right to sell one to it even if it is old and has been written off.

There is no policy for supplying the shops with raw material either. It is good that it is not necessary to search for it, but industrial requirements--who operate rhythmically with minimum supplies of raw material--are not always suitable for the kolkhoz. It is more convenient for the kolkhoz if during the winter the shop creates a supply of products so that during the summer it can more extensively enlist workers for agricultural work. But sometimes the enterprises cannot provide this, even if they want to. It "impedes" the plan for material and technical supply. Therefore, the workers of those shops in which the raw material problem is not so great, work 20-30 percent of the annual working time in the fields, and in the others, where they ship in only enough raw material for two-three days, they only work ten percent of their time in the fields.

There is another fairly delicate problem--about the profits of the shops. Some workers of supervising agencies consider them too great. They are inclined to explain this by the fact that the prices on the items have been increased. They think that the level of profitability of the kolkhoz shops should be the same as that of state enterprises. It is difficult to agree with them. The costs of the products produced by kolkhoz shops is low because they do not maintain surplus service and administrative personnel and they have their own kind of Shchekino system. Amortization deductions are not great either since the premises are mainly adapted ones, and the equipment is not expensive. And the main thing is that the kolkhozes regulate wages in such a way that they are no higher for workers of the subsidiary shops than they are in animal husbandry and field work. Otherwise the discipline in the main branches would be undermined. So while the earnings in the shops amount to an average of 120-140 rubles a month, in the main agricultural shops they are 170-190 rubles. This does not mean that there are no material incentives for workers of the shops. They gain in another way--by receiving all the privileges of kolkhoz workers, and they do not spend time and money on daily trips to work, and so forth.

As a result, the production costs of industrial products of the kolkhozes seem to be artificially reduced, and the cost of agricultural products seems to be increased. Does this cause harm to the common interests? It seems that it does not. New socio-economic phenomena must be evaluated in terms of new measures as well.

There is no doubt that the creation on the kolkhozes of shops that operate on the basis of direct cooperation with industrial enterprises is a promising matter. It makes it possible to efficiently utilize raw materials and wastes from industry, local raw material resources, and the labor force of the kolkhoz workers during the interseason period, and also to obtain additional income for strengthening the public economy and to produce consumer goods and goods for industrial purposes in rural areas without excessive concentration of the population in cities with all the consequences that ensue therefrom.

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FIGURES ON RURAL COMMUTER LABOR

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 p 112

[Text] Commuter labor is one of the forms of nonagricultural employment of the rural population (in state and cooperative enterprises, institutions and public organizations).

Rural Population Employed Outside of Agriculture and Commuters in Union Republics in 1975, per 1,000 Rural Residents of the Republic

Republics	Commuters	Employed outside of agriculture, individuals
USSR	54	254
Estonia	108	311
Ukraine	83	211
Latvia	82	289
Lithuania	82	214
Belorussia	66	237
RSFSR	60	312
Armenia	50	200
Moldavia	49	213
Georgia	46	199
Kirghizia	44	200
Tajikistan	30	95
Uzbekistan	19	141
Azerbaijan	17	148
Kazakhstan	16	313
Turkmenia	11	61

In the RSFSR, because of the immense territory and certain peculiarities of the development of the branches, there are significant fluctuations of the intensiveness of commuting. They increase from the east and south toward the center and the northwest of the European part of the republic. Thus in the

Central Economic Region its intensiveness in 1975 (there are no more recent data) reached 130 people per 1,000 rural residents, the Northwest--75, the Volga-Vyatka--68, the Central Chernozem--65, the Northern Caucasus--41, and in Siberia and the Far East it was two-thirds-one-third of the average for the USSR. The fluctuations of this indicator were not as great in other republics.

From the book: Khorev, B.S., Likhded, V.N., "Zhitel'sela--rabotnik goroda" [Rural Resident--City Worker], Moscow, "Financy i statistika", 1982.

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RESISTANCE TO CHANGE IN VOCATIONAL TRAINING DEPLORED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 113-120

[Article by G. Ye. Germaidze, candidate of economic sciences, scientific leader of the branch laboratory of scientific organization of labor and administration of the Sverdlovsk Institute of the National Economy, and I. V. Molchanov, deputy chief of the administration of personnel and training institutions of the Ukrainian SSR Ministry of Ferrous Metallurgy (Dnepropetrovsk): "What to Teach the Technician?"]

[Text] The Tekhnikum graduate is a future master, brigade leader and highly skilled worker. The fact that frequently he does not have sufficient knowledge, ability or skill either in the main technological or in the administrative, planning and research functions, as a rule, is explained by the inadequate study of these functions in the Tekhnikum. Judge for yourself. How does one train a master to lead a collective (up to 70 percent of his working time goes for this) in the seven hours that are allotted to the program subject, "Economics, Organization and Planning of Production"? Can one seriously speak about the possibility of good technological training of a graduate if in the profile subject "Blast Furnace Production" only thirteen of the 305 hours are devoted to concrete technological operations, and about 30 are devoted to the operation and repair of blast furnaces? Finally, at best, 44 percent of all the disciplines that are studied which occupy approximately 40 percent of the training time participate to varying degrees in the formation of the professional qualities of a blast furnace operator. And the rest of the time goes for forming the qualities and knowledge that are only indirectly necessary to a technician in this speciality.

It is possible to strengthen the profile discipline only by weakening the general technical and general educational disciplines. But any attempt to do this inevitably encounters resistance from teachers and from the corresponding subject commissions, who justifiably prove that in any case the time that has been allotted is insufficient for assimilating the complex, labor-intensive and voluminous material which is extremely necessary for creating the base (fundamental) training of a technical specialist.

The experience that has been accumulated in improving training programs in tekhnikum amounts mainly to searches for reserves of hours and their redistribution, and to the replacement of certain subjects with others or to the juggling out of new disciplines. But the principle itself of selecting subjects to be studied remains unchanged, that is, as usual they teach relatively general "subject-sciences," within which there is supposed to exist intersubject ties that join them together into a system. This principle is also in effect in higher educational institutions. But if when training engineers it is justified to a greater degree, for tekhnikums to copy this simply leads to a situation where they continue to produce mainly "semi-manufactured specialists," leaving for production not only the task of "completing" the professional mastery of the graduate, but also the task of forming his skills. This process frequently takes place with mistakes and losses. Is this not one of the reasons for violations of technology, which have reached 25-50 percent at certain enterprises?*

But what has been said should not be understood as a denial of the need to study science. No! It is simply that "subject-sciences," as a rule, are only formally joined together by intersubject ties. Actually these ties are extremely conventional. And this is quite explainable, since the task of each discipline is to familiarize the student with the fundamentals of the given science, its structure, logic, the proof system, methods of calculation, and so forth. Among this material, which is basically not directly related to the speciality, there is information which is actually necessary in the future work of the graduate. Thus information that forms the work qualification of the blast furnace operator is dispersed among fourteen subjects. Its proportion in each of them varies from ten to 70 percent of the expenditures of training time. The disciplines are joined together by individual subjects which are studied frequently in different semesters and not in the same course. And it turns out that formally concrete professional knowledge is provided and actually the necessary information is dissolved in the overall flow. The knowledge does not last long, and, the main thing, the ability to apply it is not instilled.

Another shortcoming of "subject-sciences" is that their study presupposes a certain theoretical basis which requires a fairly large amount of time to assimilate. Moreover, these expenditures are frequently not justified from the standpoint of the significance of the subject for the given speciality. For example, when studying the courses "Fundamentals of Technical Mechanics," and "General Electrical Equipment With the Fundamentals of Electronics," the program allots 305 hours, that is, the same number as for the discipline "Blast Furnace Production." For blast furnace workers these subjects are secondary, and approximately 10-30 percent of the topics are actually necessary for their work.

But to change, reduce or remove certain topics is complicated--logic is violated and mastery of the subject becomes more difficult. As a rule, these

*Terukhov, S., "Behind External Causes," PRAVDA, 27 November 1980.

Attempts encounter resistance from pedagogues, for, in particular, this leads to a reduction of their load and, consequently, to a loss of wages. It is equally difficult to introduce new topics which are extremely necessary for the future work of the specialist, since they are the subjects of other scientific disciplines. For example, a blast furnace operator needs profound and solid knowledge of the theory of metallurgical processes. There is no such subject in the training plan. But there is the subject "Fundamentals of Physical Chemistry." It would seem that it would be expedient to introduce into this subject topics from the scientific discipline "Theory of Metallurgical Processes" or to teach physical chemistry using examples of processes that take place in fusion. But this does not come into the program of the course. And far from every teacher is competent in metallurgical processes. Therefore, the formation of theoretical knowledge is included in the subject "Blast Furnace Production." But this subject has its own tasks and its own group of problems. As a result, extremely necessary material slips through the gaps between the subjects.

Even if why as long as training plans for tekhnikum are filled in with selections from autonomous disciplines which are selected according to their correspondence to a particular science (theoretical or applied), we will hardly succeed in joining the information from various subjects together securely enough into a single system of professional knowledge and abilities of the specialists with a secondary specialized education. The organizational and methodological autonomy of the subjects gives rise to differences in the goals of study of general technical and profile subjects. Each of them is supposed to be interested in forming professional qualifications. But under the conditions of the critical shortage of class time, the teachers of general technical and many specialized disciplines, striving to disclose "their own" learning material and retain the "appearance" of the subject, are not especially concerned about strengthening intersubject ties with profile disciplines. When hours are cut for such a subject it is the applied information that is discarded first.

What is the solution?

The main thing, in our opinion, is to teach the students to fulfill their future functional duties. To do this, the names of the subjects should correspond as much as possible to the names of the functions of the specialist—they should take his role into account. The functionalization of disciplines should simultaneously be combined with a changeover from the traditional principle of "general technical and general scientific subjects"—the guaranteeing a broad profile of training" to another one—"general engineering and general specialized information—for instilling a good, theoretically substantiated practical ability in the specialist."

We used the latter principle when developing a new training plan and program for the tekhnikum in the specialty "Blast Furnace Production".*

*Participating in the work were G. F. Belov (Sverdlovsk Institute of the National Economy) and G. V. Karman (Ukrainian SSR Ministry of Ferrous Metallurgy).

In keeping with the aforementioned concept it is important to have primary information that pertains to the functions performed by the technician. Therefore the problem consists in selecting training material and defining "subject-functions" which must also include this information. For instance, a blast furnace operator works as a master of the division for technical control or an assistant engineer in a research institution. In order to perform control and research functions he must have the ability to conduct simple physical and mechanical tests, chemical and metallographic analysis, be able to apply methods of statistical analysis, know the organization of technological control, and so forth. Consequently, it is necessary to have a subject-function "Technical Analysis and Control," which would concentrate the training material that pertains to these problems but is distributed among various disciplines. Hence it is justified to combine the previously independent subjects "Analytical Chemistry" and "Technical Analysis" with the subject "Methods of Investigation and Testing of Metals" from "Metal Science" into an independent discipline. Moreover, in the subject "Metal Science" the section entitled "The Structure and Crystallization of Metals" has something in common with the same subject of the new discipline, "Fundamentals of Physical Chemistry of Metallurgical Processes" and it would be expedient to transfer it there. The remaining section, "Thermal Processing," elaborates the corresponding metallurgical section and therefore is included in the subject "Metallurgy of Ferrous Metals." As a result, "Metal Science" is divided into three disciplines, but the effectiveness of its study increases as a result of the closer attachment to the functions of the blast furnace operator (even with a certain reduction of the number of training hours).

Instead of the subject "Mechanical and Transportation Equipment for Blast Furnace Shops," we have introduced another one--"Operation of Mechanical and Transportation Equipment for Blast Furnace Shops." It would seem that the title has been changed insignificantly. But as a result, the nature of the discipline has been radically revised. For a blast furnace operator, work with mechanical (electrotechnical, control and measurement) equipment serves only as a means of carrying out a technological process. Technologists, by the nature of their activity, operate equipment, but they do not repair or adjust it. The corresponding specialists are trained for this. Orientation toward operation has caused us to study breakdowns, the influence of technological conditions on reliability of operation of equipment, methods of eliminating malfunctions and the organization of the interaction between technological and operational-repair personnel. These questions were not included in the subject that has been studied traditionally, and all attention was concentrated on the construction, distribution and principles of operation of the equipment.

The functional approach also makes it possible to take a different look at the content of the general technical course, "The Fundamentals of Technical Mechanics." If it is regarded not as an independent discipline, but as a theoretical base for mastering skills in operating equipment and, on this

basis, is included in the profile subject as a section, it becomes possible to strengthen the subject related to wear and tear and breakdowns of mechanisms. The rest of the topics can be studied at the level of concepts without special difficulty. As a result time is released for introducing sections "Fundamentals of the Reliability of the Operation of Equipment" and "Organization and Technology of Operation of Equipment." Let us note that it is impossible to combine emphases in this way in the independent discipline, "Fundamentals of Technical Mechanics."

Similar operations have been conducted with many disciplines, which has made it possible to introduce courses and subjects, the need for which has been especially emphasized by specialists of enterprises during the time when we were conducting the questionnaire. For example, a new subject has appeared in the training plan: "Administration and Leadership." It occupies 62 hours and has a division entitled "Practice in Management" which occupies 42 hours.

From the examples that have been given, it is clear that the proposed approach will radically change the system for training technicians. And here one finds the psychological barrier of inertia on the path to the new. First of all, certain experts who reviewed the experimental plan we developed were obviously affected by the stereotype that has been formed by the traditional approach to training.

In our opinion, the nature of this stereotype consists in that there cannot even be any doubt about the expediency of applying identical principles for drawing up training plans and programs (and also textbooks) for VUZ's and technicians. And strange as it may be, the reason for this is the high qualifications of those who have compiled methodological training documentation who willingly or unwillingly transfer the principles they have assimilated in VUZ's to training and technicians. Moreover, the existing system is convenient for agencies that determine the training of technicians since they bear practically no responsibility to the "consumers" for the quality of the training of specialists: they must take what they can get. The broader the list of subjects, the simpler it is to standardize the training process and make it less expensive, and it is not necessary to keep trying to figure out how to adapt the content of training to the varied content of the labor of the technician. Unchanging textbooks and the possibility of extensively utilizing specialists with university training--all this explains why during the regular review of training and methodological documentation they try not to touch upon the basic principles for its development. Hence also the persistence of the shortcomings in training plans. This is precisely what explains the generally known fact that clearly little used subjects not only make their way from plan to plan, but under the pretext of the need to form a broad profile, are declared to be equally vitally necessary for any technician (specialist).

This psychological barrier is apparently also an impediment to the USSR Ministry of Higher and Secondary Specialized Education, which for three years

now has not permitted the experiment to be conducted to test the experimental training plan we have developed. They have referred to the difficulties in selecting and training the teachers in certain functional subjects and also the lack of the corresponding textbooks. These difficulties actually do exist. But we are convinced that the advantages of raising the level of professional mastery within the training institutions will more than make up for all the temporary inconveniences of restructuring the training process. It is time to experimentally verify our suggestions. The Ukrainian SSR Ministry of Ferrous Metallurgy has set up an appropriate tekhnikum for this and has selected the instructors. The matter is now in the hands of the Ministry of Higher and Secondary Specialized Education.

The principle we have suggested for training specialists can also be used as a basis for a bilevel system of training in the first stage of the VUZ, and we have already written about this in EKO.

At the June (1983) Plenum of the CPSU Central Committee one heard the words: "We are not fully satisfied by the level of training of specialists for the leading branches of the national economy either." This undoubtedly pertains to the training of technicians. Our suggestions are an attempt to help in solving this problem.

Germantse, G. Ye., Kharlamovich, G. D. "Toward a Diploma--In Stages, EKO, 1980, No. 3.

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ECONOMICS OF PUBLISHING

Novosibirsk **EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA** (EKPO)
in Russian No 9, Sep 83 pp 121-122

[Introduction to articles that follow]

[Text] Our magazine is turning for the first time to the printing branch. Its items--books, magazines and newspapers--perform most important ideological functions, propagandize the Soviet way of life, and circulate the best creations of world culture. The small "blank" products perform more modest functions, but they are critically needed in literally all branches.

The printed product is: it is always an object of mass production, and all the qualities of an industrial product are inherent in it.

The authors of the articles published below consider certain economic aspects of the production and sales of printed products and use examples from this branch to analyze the appearance of the actual and imaginary shortage.

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ECONOMIST EXAMINES BOOK PUBLISHING COSTS, PROFITABILITY

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 122-132

[Article by V. S. Sominskiy, doctor of economic sciences, Leningrad Order of the Labor Red Banner Technological Institute of the Pulp and Paper Industry: "The Book as a Source of Income"]

[Text] Book publishing has long been considered profitable. In the capitalist world, multimillionaire publishers are ready for any adventures for the sake of circulation. For circulation means profit, and millions of copies means gigantic super profit. Let us leave to the side the ways and means to which they turn in the Western world in order to increase the circulation of newspapers, books and magazines. The overwhelming majority of them stand in contradiction to the elementary norms of morality and ethics, humanism and social progress. Let us forget about advertising which bring immense income to the publishers. The income from this is sometimes no less than from the sale of the publications themselves.

What remains, what in the very idea of income from book publishing is acceptable for a socialist economy?

There is no doubt that the publication of the printed product in large additions is advantageous since this is the only product which by nature does not need any services of the national economy after its acquisition.

Private automobiles need roads, gasoline and repair. A refrigerator needs energy plus repair. Film production needs to be shown. Dresses, suits and coats, even when they are well cared for, fade, wear out and go out of fashion. And so forth. But a good, intelligent book stands on the shelf and remains there, read and reread not only by us, but by our grandchildren and great grandchildren.

Large-circulation publications are very profitable. Here are some concrete examples. Before us is a book by L. N. Tolstoy "The Caucasus, Tales and Stories." It has 18.48 printers sheets. It was published in the series "Classics and Contemporaries" in an edition of 2,950,000 copies. The price of one copy is one ruble 50 kopecks. Expenditures on paper, equipment, print and so forth are about 400,000 rubles. Approximately 100,000 more

rubles go for paying for trade and transportation services. The net profit will amount to almost 4,000,000 rubles.

And here is another example. The circulation of one issue of a "novel-newspaper" averages 2.5 million copies. With 24 issues a year this amounts to 60 million copies. With an average price of one copy of one ruble, 20 kopecks, the earnings could amount to 72 million rubles. But, taking into account the preferential conditions for subscriptions, the earnings could be appreciably less--about 60 million rubles. Expenditures on paper, printing, transportation and so forth will amount to about 5 million rubles. As a result there will be approximately 55 million rubles in net profit. In these very rough calculations which are based on existing norms we have not taken into account the profit from producing paper and in the printing production. The actual amount of profit is greater. It is not without interest that the proportion of expenditures on paper in the overall cost of the sold printed product is extremely small and amounts to an average of about six-nine percent for books and magazines, and 25-30 percent for newspapers. Is any better proof necessary to show the economic advantageousness of large-circulation books or large-circulation magazines?

All of our reasoning is good, but only under certain circumstances. In the first place, the consumer demand for the printed product must be constant and long-lasting. In the second place, it is necessary to have a material base for the publications: paper, binding materials, and presses.

The Largest and Most Educated Readership in the World

During the years of Soviet power the educational level of the population has changed radically. Just during the past decade (1970-1980) the proportion of people with a higher education has increased by almost three-fourths, and with a secondary education--by one-third. But the publication of books, because of a number of factors and primarily because of the shortage of paper, has appreciably lagged behind the growth of literacy and education. From 1970 through 1981 the number of books and brochures published increased by only 5.2 percent, and their circulation--by 45 percent. The average circulation of one book or brochure in 1981 had increased by only 20.5 percent as compared to 1950.

True, from year to year the number of mass libraries and books and magazines kept in them increases. In 1970-1980 this increase amounted to three and 33.7 percent, respectively. But libraries alone, of course, cannot satisfy the demand for books. Moreover, against the background of the general figures of arrears in book publishing there is an even more marked lag behind the demands in the publication of artistic literature and literature for children and young adults.

In 1981 for every 1,000 people with a higher or secondary education, 2,217 copies of literary and artistic books and brochures were published, and 3,548

copies were published for children and young adults. Actually the reader could buy two books or brochures of artistic literature a year and three children's books (including coloring books). And if one adds to those readers with a higher and secondary education those who do not have this education but can and want to read books (for example, children younger than ten years), there is not even one book per year.

According to data from the end of 1980, there were only 1,824,000,000 books and magazines in mass libraries. Let us assume that there are as many or slightly more in private libraries, that is, about 2 billion copies, or 13.6 copies per one person with a higher or secondary education. But this also includes textbooks, technical literature, magazines, brochures and the smallest books for children of preschool age. Thus, in private libraries there ends up to be an average of five-six books of artistic literature. Is this not too few?

One can assert that the notorious book boom is only a critical need for books and the desire to have a personal, family library. And this is not a short-term phenomenon, but a tendency that spans many years. To meet it halfway and to do everything possible to satisfy the demand for books is not only a socially important matter, but one that is extremely economically effective.

Truth and Falsehood About the Book Boom

We have all had occasion to read about the philistines who select books according to the color and size and about those who accumulate books strictly for the material value. They do not always speak respectfully about the collectors of private libraries and compare them to public libraries. Finally, we have witnessed discussions about the dying out of the printed word and the changeover to texts printed on film, integrated circuits, crystals and so forth. All these are effective, but, fortunately, they do not threaten our old friend--the book.

According to our calculations, up to the end of the twentieth century and far beyond it the publication of books, journals and magazines will not decline, but will increase, and at fairly rapid rates. And the possibilities of recording information on crystals or things like them will be widespread primarily for technical and reference information.

Of course there are "readers" for whom the book is only a part of a fashionable interior. This is a pity. But if not they, then their children, acquaintances and friends will read the books they have bought.

It is absurd to compare private libraries to public ones or to require that open access to a private library be given to anyone who wishes it. The collection of private libraries and their utilization is a purely individual matter, even an intimate one which reflects the tastes and passions of the individual. Good counsel and friendly support from book lovers and, the main thing, the availability of books for sale--this is what the owner of a private library needs. Mass libraries have their own tasks which are extremely important and useful to the society.

But one cannot agree with the authors of a number of articles that suggest changing the proportions between open sale of books and their purchase by public libraries in favor of the latter. This could possibly be correct if there were a critical shortage of books, but it is extremely disadvantageous economically and inefficient on the social plane, especially with the reduction and elimination of the shortage of books and magazines. The desire to purchase a book, magazine or illustrated edition should be encouraged and supported in all ways. Such "acquisitiveness" is noble, even with the zig-zags of fashion.

The rapid growth of education aggravates the book famine. People have learned not only to read, but also to understand and experience the happiness of gaining knowledge through a book, the pleasure from reading over their favorite pages. The many millions of copies of classical Russian and foreign literature will never be left in the trade network or need to be marked down. An edition of ten-fifteen million copies is quite marketable! The history of mankind has never known anything like this. In the West, this is unthinkable. But for us it has become a real possibility which needs only to be economically substantiated.

The Material Base for Large-Circulation Editions

To publish books it is necessary first of all to have paper. In order to publish, for instance, 100 books with 20-22 printers' sheets in an edition of ten million copies, it is necessary to use approximately 270,000 tons of paper (for the sake of some simplicity, assuming that it is a paperback). This edition can be undertaken each year, changing the titles of the books, but in certain cases also repeating them. We are speaking about popular books for the largest reading audience, selected essays and selected works of Pushkin, Tolstoy, Gogol, Turgenev, Nekrasov, Dostoevsky, Lermontov, Gorkiy, Zola, Dickens, London, Fedin, Sholokhov, Aytmatov, and so forth. This should be an edition similar to "Classics and Contemporaries." It could be given the name "Personal Library."

Imagine the joy of millions of people who will be able to acquire for their own use, say, ten of these books a year and to pay, for instance, twenty rubles. In approximately ten-fifteen years it will be possible to collect a small library.

In 1981 the USSR pulp and paper industry produced about 700,000 tons of paper for printing, offset and engraving. It is necessary to limit the circulation and establish limits on subscriptions. Add to this 700,000 tons another 270,000 tons at existing enterprises--it is not an easy task, but it is possible with reconstruction and the installation of more powerful equipment. And it would perhaps be even easier if, in addition to reconstruction, we were to construct three-four enterprises with a capacity of 50,000-60,000 tons of printing paper a year? They could be constructed on the basis of

processing wood by-products and waste paper with a minimal addition of pulp. The construction of such an enterprise is within the capabilities of an average construction organization and could be carried out in two years. It would not need much water, and the purification installations are small. All of the processes would be mechanized and automated. Domestic machine building is quite capable of providing the entire technical base, including the equivalent printing production, which also has to be developed.

Paper and Printing--A Unified Complex

The path of paper from the place of its manufacture until its transformation into a book or a magazine is thorny and strewn with losses. Judge for yourself. After the prepared paper is cut into rolls, each roll is repeatedly covered with wrapping paper, the ends are glued, and the stenciled label is pasted on. One uses fifteen kilograms of wrapping paper per one ton of paper. For wrapping newsprint and other paper for printing in 1981, we expended 32,000 tons of paper, which, translated into timber, amounts to about 100,000 solid cubic meters. Moreover, not all the packaging operations were mechanized, and therefore they required many workers. But the losses of paper and labor at the paper factory are only the beginning.

The rolls are loaded into rail cars and shipped over thousands of kilometers to the place of consumption. There they are unloaded and sent to the wholesale base and, finally, local transportation (again--loading and unloading) is used to deliver them to the printing establishment. The losses of paper en route reach 1.5-2 percent of the weight. This amounts to about 40,000 tons, or, translated into timber, 150,000 solid cubic meters (since the expenditure of timber on paper for printing is much greater than for wrapping).

In the printing office, when rewinding the rolls, adjusting the rotation machines and with the additional cutting for the format, one loses another 1.5-2 percent of the paper. True, not for good. A large part of these wastes go for scrap paper and are used when manufacturing cardboard, wall-paper or packaging paper.

Thus, direct and indirect losses of paper for printing, according to the minimum calculations, amount to about four-five percent of the volume of its production. This is approximately 110,000-120,000 tons a year, that is, the amount that could be produced by an average-sized enterprise of the pulp and paper industry or by two small enterprises. Nor can one forget about the considerable expenditures on transportation (thousands of railroad cars, hundreds of thousands of trips of trucks, and tens of thousands of loaders), and on the wages for many thousands of workers who are employed in packaging the paper, and gathering and packaging the scrap paper in the printing establishments.

Yet an appreciable part of all of the aforementioned expenditures and losses could be avoided. How? By organizing printing as part of the pulp and paper combines that manufacture the widespread kinds of paper for printing: newspaper, typography, offset and engraving. And we are speaking not about the

printing establishment, but about the printing shop, which should have binding and brochure equipment and large rotation machines that are adapted for printing from stereotypes or forms of mass large-circulation editions. Such, for example, as the "private library" we proposed, that is, editions for which there is no need to bring the printing establishment closer to the reader as is the case with respect to daily newspapers.

How much simpler everything would be! The prepared paper would go directly from the paper machines to the intraplant transportation, and without any packaging or special marking it would go to the printing shop. All of the clean cuts and scraps would be returned to the paper factory, and the dirty ones, after cleaning, would go for wrapping paper, which is manufactured on another machine at the same paper factory. Production stocks and the amount of circulating capital would be sharply reduced, a good deal of warehouse space would be freed, as would many thousands of railroad cars and trucks, thousands of workers, and fuel. Of course, it is necessary to have book bases. But they are also needed now, but they would be located not in Moscow and in Leningrad, but in other places.

Thus, the association of paper factories with printing and binding shops provides another possibility of expanding the material base for large-circulation publications with minimum expenditure of funds.

Repayment In Seven Months

Let us return, however, to our calculations. Expenditures on paper with an overall addition of one billion copies of the "Private Library" will amount to 81 million rubles, and printing expenses, transportation, trade and other expenditures--to another 100 million rubles. The earnings from the sales will be two billion rubles. The net income will be 1,819,000,000 rubles.

The construction of a paper factory with a capacity of 60,000 tons a year, taking into account expenditures on semimanufactured products, machine building and construction of the corresponding printing base as well as other things, will cost approximately 220 million rubles, and five of these enterprises would cost 1.1 billion rubles. The expenditures could be recouped in seven months! It is possible that expansion of existing enterprises would be even less expensive. Then the expenditures would be recouped in shorter periods of time.

The USSR State Committee for Publishing Houses, Printing Plants and the Book Trade, which has jurisdiction over the printing industry, could quite easily take out a loan for the construction of these enterprises from the Gosbank. The time period for recouping the expenditures allows this. Incidentally, the USSR Ministry of the Pulp and Paper Industry could also obtain a loan.

We are not even considering the economic prerequisites for increasing the circulation of artistic and popular magazines, illustrated editions, reference

books and encyclopedias for mass purposes, calendars and so forth, in a word, again editions with circulations of many millions. One can assert that here too the economic advantage would be very great. And the social significance cannot even be evaluated.

In conclusion, a couple of lines about calculating the effectiveness of capital investments. With respect to products that are intended for private, final consumption, in our opinion, the absolute effectiveness of capital investments should be determined not according to the wholesale prices of the enterprises but in terms of the retail prices. If we do not take into account the return on capital investments in profit from the sale of the products to the population, we deprive ourselves of a necessary reference point in determining prices and in determining the shared participation of the branches of the national economy in creating the final product. Also in the background are those economic workers (both designers and planning agencies) who have made capital investments and not recouped them in short periods of time, periods not of eight-twelve years, but periods of months, as in the example of printing enterprises.

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PESKY PROBLEMS OF BLANK, LABEL, FORM MANUFACTURING DESCRIBED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 132-141

[Article by V. G. Ramm, candidate of technical sciences (Leningrad): "The Cost of a Label"]

[Text] Let us talk about blank forms and labels. Of course, blank forms are not taken into account in the interbranch balance. But for 3000 rayon printing establishments (and sometimes not only for them)--these are the main products. Perhaps not in terms of importance, but in terms of gross output, employment of personnel, utilization of machines and products lists: the annual quantity of orders numbers in the thousands! And the most important thing is that in the majority of cases the printing establishments produce these products profitably.

The production of blank forms and labels, like, probably, any production, encounters entire masses of contradictions, difficulties and shortages.

Let us try to straighten out this mass of contradictions. Imagine: you are the client, the responsible worker of the plant which produces...let us say, condensers, and you have gone to the printing establishment with a request: you need labels to paste on boxes of these condensers; you also need letterheads for correspondence, and also unofficial stationery, say, personal paper for reporting on personnel and payment instructions. An ordinary client and an ordinary order: there are hundreds if not thousands of these each year in any printing establishment.

The director of the printing establishment, to his great sorrow, cannot help you:

"You know, there is simply nobody to set the type. There is only one manual typesetter left--a dying profession. He is busy 24 hours a day. In five years he will go on a pension--and we do not know what we will do...and our equipment--you can see for yourself: it is old, it is always breaking down, we barely fulfill the plan, and we have to work on Saturdays.

"Incidentally, do you have paper? Not yet? Well, dear comrade!...you mean you helped the cement plant? And it helped us--you can see the premises in which we work! Ah, well you can give it to us in a week? Well, okay, we will not leave you standing high and dry! Let us make 200 personal forms for you from scrap paper and we will help with the 'payment instructions'--fill out the order; in a week come with your own paper and we will add it. We will do the company blank forms also also, but not soon, in about six months--there are a lot of orders; and we will really not be able to do the labels at all..."

This was the entire conversation. Let us see what its participants will do next.

They will do your personal forms and your payment instruction forms for you in the printing establishment, and they will do it quickly, literally on the next day. True, the typesetter has almost nothing to do with this order: everyone needs personal forms and the matrix or the stereotype or the photographic forms are stored permanently; the typesetter just installs the type with the number of your order and the amount, and everything is printed within less than a half hour. And the payment instructions generally come from previously printed stocks. Expenditures on printing the order are less than a ruble!

The situation is worse with labels. You have traveled all over the oblast (it became immediately clear that telephone conversations were useless), but only in another oblast 1,000 kilometers away did you find someone who needed your condensers which are in short supply--you have written out your order, but you have increased it five-fold, just in case.

But do you know that this is just the beginning? And you will be tired of it before very long: you travel, humiliate yourself, beg, plead, deliver--and with a firm hand you write in the order for fixed capital: "typesetting equipment." What is the best? A Monofoto-600? Well and what about the imports: our products go to the West--we have foreign currency! And for the blank forms, something simpler, say a linotype N-140..."printing equipment." We would like a Swedish offset machine--a Solna, for example, well, and they also have a Gilding press, a BR-110 sheet cutter, our Pelikan wire sewing machine, and a few other things...

You have a fund for the development of production--you have ordered the equipment and published the announcement: "Typesetters are needed..., wages, bonuses, there is a kindergarten and a house of recreation." But still you need a typesetter for manual work--for blank forms; there is no point in writing about it in the announcement: you have in mind quite a particular person: you go to him and discuss the progressive wage rates, the volume of work "do not hit a man when he is down," and about the fact that there will be an apartment in a year or two.

But what is the result? A departmental printing shop is created, and its capacities are comparable with the capacities under the jurisdiction of the State Committee for Publishing Houses, Printing Plants and Book Trade. The actual productivity of the equipment is many times less than the nominal, and the repair is many times more expensive, but this does not bother the enterprise--for we are speaking about auxiliary (supported) equipment. Skilled printers are used in their profession only a small part of the time, but they have no other concerns: the blank forms, and the labels, and the addresses for people who are having anniversaries, and everything that is needed--is of the best quality and on time.

The damage caused by the "padding" of the stock of machines in the various departments was discussed in EKO, No 1 for 1982. One should also remember the poor effectiveness of the utilization of foreign currency when purchasing imported equipment, and the artificially inflated demands for domestic equipment: it is the ministries and departments, and not the State Committee for Publishing Houses, Printing Plants and Book Trade that dictate the structure of the output of equipment for printing machine building enterprises; this branch does not have much fixed capital, and the demands of the departments are increased both for new equipment (for example, the Kaskad photo printing set of equipment) and outdated (for example, the automated 2NFA photo printing equipment) impede the assimilation and output of new equipment for large printing enterprises.

And another most important consequence of "padding" equipment which blocks the path to intensification is the low level of utilization of the machines themselves and the workers in the occupations where there is the greatest shortage (this pertains not only to printers, but to any machine operators). These are all consequences of shortages in printing, shortages that cost the national economy millions of rubles.

And at first it seemed that the "sly" director of the printing establishment "extricated himself" and even with a terrible shortage fulfilled (and even overfulfilled) the plan. Now it will probably seem to you that he became a leading worker through the seat as well, with the help of the usual write-ups: money was received for the typesetting, and no typesetting took place...

Let us unravel our mass of contradictions from the other side. Do not hasten to judge the director, and certainly do not ridicule him; he is to be pitied. In the first place, he sawed off the branch on which he was sitting; the typesetter left him to go to the condensor plant. In the second place, it was precisely because of his helplessness, his inadequacy, that the mechanism of economic relations was put into motion, which caused the country millions of rubles' worth of harm. In the third place, nobody wrote anything up. Price list No 57-01-53 (Wholesale Prices for Printing Products) establishes the cost of blank (label) products which is the same for all clients--there are no possibilities of "incorrect interpretations." This price list--stop! Here it is--the first sore spot.

You remember the story about the thoughtful landowner who set fire to a 100-ruble bank note in order to look for a penny that had rolled under the couch? The price list reminds us of instructions for such a landowner...

At first glance everything seems wonderful: neither the normsetter (book-keeper) nor the inspector needs to expand any intellectual effort in order to establish the value of the order (even the ability to count is not compulsory): everything has already been multiplied and divided, and it is indicated how to make the stereotype, and when it is not one can find on the table the parameters of one's orders and get the money ready.* The price list has been drawn up in such a way as though the client and the printing establishment are meeting for the first time. Yet selective investigations show that no more than five percent of the blank products change each year, that is, it is expedient to preserve the matrices or stereotypes for no less than 95 percent of the blanks, not to mention the photographic forms. But it is as though the price list has no idea of this. Regardless of how much it may want to, the printing establishment cannot deliver you a bill only for the printing process, taking into account the fact that this process is carried out with a stereotype that is already prepared--this possibility is not envisioned by the price list: just the type and the printing together.

And what happens? Do they set up the type for the same blanks over and over again? Nothing of the kind: they all preserve the stereotypes or matrices for repeated orders, and they all gather the orders from various organizations together on the same blank and print them all with one stereotype, changing (in the extreme case!) only the individual requisitions (number of the order, number of copies and date). Blank products provide for a profitability of 1,000 percent! Otherwise why would they print blanks even on Bering Island.

From the book or orders one determines the average number of copies, and from this--the need for equipment and workers, and not only typesetters but also printers: more time is needed to get the forms ready, which means that the machines stand idle for a little while--and more machines and more printers are needed. all calculations--for personnel, equipment, space, profitability, output and so forth--will be made with scrupulous precision. There is only one small detail--they have nothing to do with reality.

They do not need so many typesetters, nor so many printers, nor so many machines! In the majority of cases there is no shortage of personnel or equipment--there is a plan in rubles which is in no way related to the actual needs.

*Incidentally, the price list is a fairly large and scrupulously drawn-up document; only skilled people can figure it out easily, but this does not usually bother the client: even a ten-fold increase in the cost of the order amounts to 0.001 percent of the cost of his basic product.

The printing of small orders is a support branch: this means that the price list that regulates its interrelations with the clients should help it to provide for fixed (not elastic!) demands with the least expenditures of labor, time, and materials, and with a maximum of service. Why? Not so much in order to contribute its ruble of profit to the state money box as to prevent the wandering of millions of rubles, to reduce the labor shortage, to accelerate the updating of the stock of printing equipment and to improve the utilization of highly productive equipment. Briefly, this is in order to contribute energetically and enterprisingly to the intensification of our overall national economy. And the profit from printing is only a stimulus for this enterprisingness.

And so one sore spot is the price list. What is the treatment for this? All in all it amounts to changing the structure of the price list! The price list should motivate printing enterprises to search for reserves for economizing and to take maximum advantage of these reserves in the interest of the national economy, and not to use these reserves as "little resources" to extricate themselves from hopeless situations. For example, let us separate typesetting and form processes from printing processes. There is no need to feel sorry for the "poor normsetter," he will take the sums that are due him.

Let us try to figure out what we need.

Is it necessary for the manufactured form or stereotype to correspond to the number of copies? That is, to write in the price list: "The manufacture of the printing form (stereotype, diapositive or whatever...for the client this does not necessarily mean anything) of the given set number of copies." The larger the proposed number of copies, the more it is necessary to pay for the form, for the production costs will increase. The main thing is for it to be disadvantageous for the printing establishment to create (form!) two starts (startups) instead of one. Let the price list bring about a savings on expenditures.

Is it necessary to store these forms and use them from time to time? Let us include in the price list: the storage of forms with a certain frequency of utilization and with monthly payment (or quarterly or once a year). The frequency indicates the best organization of storage--that which is needed rarely can be quite farther away, and cost the clients less: the fewer the changes in the form, the better the printing equipment will be used. The main thing is again the same thing--let printing one large batch of forms be more advantageous than two small ones. And if this is already the case, let the price list say that it is advantageous to combine clients--let us create conditions for this. How? Very simply.

In the first place, it is necessary to code the stored forms and blanks, and to introduce three-four levels for the indexes of the coding: individual blanks, and oblast and republic (unionwide) blanks: within the groups it is sufficient to code them in order. The code of the blank is indicated along with the initial data so that the client can order the blank on the telephone or by letter.

In the second place, we want the association to be advantageous both for the printing establishment and for the client, don't we? Let us divide the advantage between them. One can have a list of users of each form, and in order to be included on this list let the party to whom this form is needed and costly (the one who wants it stored) pay, say, half of the list price. It is advantageous for the client, but the printing establishment...it might seem to you that it is receiving money for nothing? Not exactly--this will motivate the printing establishment on its own initiative (acting as a client) to make one form with a large number of copies instead of several "weak" forms for various clients.

But how does the client know about the blanks and stored forms that are produced? It is necessary to keep an album of forms, and to sell sets of samples of blanks, say, for a kopeck each: this is advantageous for the printing establishment and convenient for the client. Oh ho!--you say,--this will be so many samples! Thousands? Why do you think so? After all, individual blank forms (for example, company forms) are not needed by anyone except for a single client, or for some kind of abuse of the situation! And if they are not necessary, it is not necessary to place them (and labels most of all!) in the album.

Finally, the direct manufacture of the blank forms is printing. The price list should establish a firm price for them, regardless of the quantity that is ordered. If the client has made a mistake and he needs more copies (printings) than he seemed to at first, this is nothing terrible: he just pays the difference. But with this policy the printing establishment is motivated to combine clients and to standardize the product; and it also wants to strive for larger batches and less frequent changes of forms. Under these conditions blank forms for mass use can be sold, as many official blank forms are already sold, through stores (for cash or on credit). Incidentally, in the stores they say that the blank forms are a most advantageous commodity. Why not divide this advantage between the store and the printing establishment--with the help of rebates?

The price list must provide the opportunity of obtaining a little advantage. How? With the help of additional payments for rush work. An order submitted a half year ahead of time will have one price, a month--another, and a week ahead of time--a third. And if it is necessary by tomorrow,--please, only in twenty copies! As in consumer services, the additional payment for rush work should involve a guarantee: if you have not fulfilled your commitments--pay a fine. And even the amount of the fine can be stipulated at the discretion of the client, as is done in the post office: indicate any cost (fine) for your job...

Thus the treatment amounts to bringing the price list in line with the interests of the client and the caprices of this client, which only seem to be caprices, but in reality each time are the expressions of national economic interest. Of course, not of the entire national economy, but only the sphere where the client operates: his clients, deadlines, contracting agents and all of his interests.

Regulation of the interrelations between client and the enterprise that performs the work which will contribute, on the one hand, to efficient utilization of the resources of the party that performs the work (labor resources, resources of capacities, circulating capital) and, on the other, will provide a maximally broad spectrum of services to the client, achieves two goals.

The first is that powerful internal stimuli are created for the party that performs the work to improve his own production structure. In the case with blank forms one can speak about specializing printing, about the hierarchy of the system, about the system of receiving points and a centralized system of distribution of assignments, and so forth.

The second is that it places the enterprise on the path of sorting out the stock of machines: departmental printing, departmental machine building, departmental timber procurements, departmental repair production and so forth.

"These are all starry-eyed discussions! Unrealistic expectations!" knowledgeable people may object. "Have you forgotten about the paper? For each client has his own paper! How will we produce one blank form for everyone?..."

True. This is the second sore spot. It depends. It is precisely the lack of confidence in the specialized service organization, and a lack of confidence that is quite deserved, that has led to the decentralization of paper. Instead of distributing funds for paper, they have distributed the paper itself. Instead of one large enterprise to manage all the resources, thousands of small ones have appeared.

If the large enterprise could organize the appropriate transportation and storage of paper, the small one would not even always know what was happening. Many kinds of paper (especially offset) require certain temperature and humidity conditions (preliminary acclimatization), but the small enterprise... have you not had occasion to see rolls of paper that are lying out in the rain? I have. Perhaps somebody thinks that these are the necessary temperature and humidity conditions?...

The small enterprise--the client--"arranges" his own orders, using small portions of paper. In this situation there cannot but be large amounts of waste: paper is expended during the time of adjustment and is thrown away where there is a small amount left over; the paper is expended uneconomically when the format does not correspond to the format of the product (large scraps); the paper is expended foolishly when not a roll of paper, but a part cut off from it is used.

The client uses the paper which he has available at a given moment. Thus one sees, for example, blank forms on packaging paper. It is not only inconvenient to use these blank forms, but it is unpleasant to manufacture them (good equipment breaks down), and there is no need even to speak about the quality of the product.

The changeover from distributing paper to distributing funds for it with centralized storage, transportation and utilization promises a whole number of advantages:

In the first place, it will be possible to reduce losses and contribute to economical utilization of both the paper itself and of the labor resources and production capacities;

In the second place, it will be possible to evaluate better the contribution of the printing enterprise (association) to the resolution of national economic problems: the total volume of funds will determine the scope of production activity.

And profit (obtained according to the price list, which takes into account all the interests and "caprices" of the client, but will not contain any "imagined work"), such profit will make it possible to evaluate the effectiveness of this production activity: the degree of fulfillment of commitments under agreements and, in the final analysis, the advantage produced for the national economy.

And another question: will the printing enterprises agree to store all of this paper? What is in it for them?! The answer is contained in the question: let this service be a mutually advantageous matter (for the printing establishment and the client). Moreover, let it be so advantageous for the printing establishment that it will motivate the system of the State Committee for Publishing Houses, Printing Plants and the Book Trade to expand the construction of warehouses for paper (along with centralized financing of this important work).

It seems that we have unraveled the mass of contradictions with reference to blank forms and labels. But this is only an example of the abnormal relations between instructions and reality. One can give many examples, but they are not the main thing. The instructions, prescriptions and price lists establish formal rules: what precisely is considered "good work." And these rules, to put it lightly, do not always correspond to the interest of the matter.

The main thing is that all of these regulating documents did not fall from heaven, but were drawn up by us ourselves. And each time there is some particular person who says that these documents are "good work" and signs the orders for bonuses. And if the document gives rise to wasteful actions, and if it is possible to get around the instructions by "small tricks," perhaps it is not necessary to have additional funds and limits, it is not necessary to have discussions about shortages--it is sufficient to revise the instructions!

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ECONOMIC, ETHICAL ASPECTS OF BOOK DISTRIBUTION CONSIDERED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 141-149

[Article by B. S. Vaynshteyn, doctor of economic sciences (Moscow): "About Books and Certain Economic and Moral Categories Associated With Them"]

[Text] "The wealth of the capitalist society is an immense accumulation of goods," wrote Karl Marx. The wealth of the Soviet society is not only a gigantic economic potential, the basis of our power and international authority, but also social ideals which are embodied in relations among people and collectives. The "currency" of this wealth is formed from such categories as honor, conscience, justice and friendship. Such are the criteria of "social effectiveness" toward which our social production and our country's entire life is oriented.

The relationship between the social and the economic in our society is a relationship of goal and means. The criteria of income, wealth and profit exists in the sphere of socialist economics as well, but these are not the criteria of Hobson and Rothschild; these are national wealth, national income and the profit of the enterprise.

But in real life the concept of "one's own" and "public" are not so clearly defined and not so strictly delimited. Morality frequently depends on principles and methods of economic control, on the actually existing economic mechanism.

Once I had occasion to attend a meeting of the balance commission of one of the large construction projects of the Second Five-Year Plan. A well-known builder, A. G. Granovskiy, said:

"In order to discover abuses there is no need to check bills of lading and documents, schedules and orders; it is sufficient to clarify the actual policy for the movement of materials and money. It is necessary to find someone who wishes to obtain illegal advantage for himself personally if there is a crack in the economic mechanism..."

In practice even now mistakes in economic control sometimes lead to conflicts with morality. The so-called shortage and the fictional evaluation indicators of the activity of enterprises frequently stimulate not only individual violation of ethics, but also proliferation of them.

I should like to illustrate the technology of the appearance of a shortage with the example of the production and distribution of books. Here is a calculation of the production costs of chess books which, as we know, are in great demand here.

Calculation of the Production Cost of Three Chess
Books (Fizkul'tura i sport Publishing House, 1981, 100,000
Copies Each) on the Basis of Existing Normatives

Indicators	1st book	2nd book	3rd book
Size of books--printers' sheets	11.27	17.25	6.72
Authors' honorarium, rubles	3320-57	3686-60	2089-61
Printing expenses	8413-57	7750-75	7700-89
Paper	7497-92	19449-20	10246-08
Indirect expenditures	2412-	3692-	2504-
Total production cost	21644-06	34578-55	22540-58
Sales price (established)	0.85	1.20	0.5
Earnings--minus trade commission	63750	90000	37500
Profit, rubles	42106	55421	14960
% of production cost	194%	164%	66%

The publishing house informs the book trade organization of the initial data: the title, the name of the author, the volume and also a brief annotation. Experienced merchants who know the market well announce the number of copies: from 300,000 to 900,000 copies, relying on a practically unlimited demand for attractive books by well-known authors at prices of from 50 kopecks to 1 ruble 40 kopecks. The publishing house, however, prints no more than 100,000 copies because of the shortage of paper, and also the shortage of printing capacities. Let us note incidentally that the shortage of paper is explained, in addition to other things, by the absurdly low prices. Can you believe that for a 400-page book the paper costs approximately 10 kopecks? And I use a ten-kopeck piece to call on a pay phone when I do not have a two kopeck piece, and here--are 400 pages!..

We import some of the paper using transferrable currency and we pay (taking into account the buying power of the currency) considerably more than the domestic release prices, but in the calculations, for some reason, we use the low prices that are in effect.

From the table it is clear that the author receives two-three kopecks from each copy. The publishing house receives profit from these books in the

amount of from 60 to 200 percent of the production cost or from fifteen kopecks to 50 kopecks per copy. The book trade organization receives a rebate of 25 percent of the sales price.

Let us return, however, to the consequences of the shortage. Some of the copies under these conditions--with a high demand and low prices--go into the sphere of private circulation, among book collectors, where they will be sold at five rubles while the list price is one ruble 40 kopecks. Within a year, when all of the copies are distributed, the price can reach ten-twelve rubles. Thus, if ten percent of the copies go through it, the private market will receive a profit that is no less than that of the publishing house, two-three times as much as the book trade organization, and ten-fifteen as much as the author receives. The readers are probably also aware of the higher rates. But the main thing here is, perhaps, not money, but the entire situation, the whole system of unethical actions which lie at the basis of the entry of books into the sphere of speculation.

A year or two ago I purchased a play by Bernard Shaw--a beautifully designed set of six volumes with a total of more than 200 printers' sheets for 40 rubles (the established price was 18 rubles) from the secretary of one official who has a subscription with the right to order new books. The official ordered some for himself, and left the rest for the secretary. This is one of the channels.

The second channel is the activity of second-hand book dealers. It is no secret to anyone that this category of individuals exists, since there is a high demand for good books. As we can see, one of the conquests of the socialist culture--the large and stable demand for literature--is accompanied by certain negative phenomena in the area of book trade.

The third channel: in the Sochi library I asked for one good book and they responded that they did not have it. It had been taken out and not returned. The subscriber had lost it--he forgot it on the beach.

"Did you demand that he pay ten times the cost?"

"We demanded the list price and excluded it from the library. It was time to get rid of it anyway..."

I asked in other libraries for books that are in short supply or issues of magazines in which "The Viola Player Danilov" or "My Diamond Tiara" was published. Either there was a long line to take it out, or the book was not there, or it could not be taken out of the reading room.

The fourth channel is the sale of books simply through acquaintances (without a monetary markup) to people who have the opportunity, in turn, to sell another book that is in short supply.

Of course what I have indicated cannot be considered exhaustive, and in any case, this is not legal proof. But one cannot deny the very fact of speculation in books and their acquisition by unethical methods. And if it were only books!

The circulation on the black market of other commodities that are in short supply is on a much larger scale. Moreover, speculation is not the only thing here; it is accompanied by much more dangerous crimes--car theft, swindling, blackmail, and large bribes. In these cases agencies that are called upon to investigate and punish appear on the scene. But the police and the department for combating the embezzlement of socialist property and speculation can fight effectively against crimes only if they are single cases, and if they appear as a sharp deviation from the norm. But if the "deviations" recur regularly as a result of a shortage of certain goods, it becomes extremely difficult to fight against them. It is necessary to find ways and means of preventing them, which requires blocking the very process with economic measures.

If unethical behavior is embodied in the form of "crime" or the utilization of one's prestigious position in society, frequently administrative measures are proposed, including, say, forbidding certain categories of officials to construct dachas, to acquire private automobiles, and so forth. This is done out of the best convictions. But does such a measure produce a long-term effect?

From the standpoint of the economist and the sociologist it would be appropriate to take not only administrative, but also educational (which, of course, is certainly not superfluous!), but above all economic measures in order to eliminate the causes of the increasingly frequent abuses so that the abuses in and of themselves could not arise.

It has been suggested that the source of the money of the purchasers of expensive items be checked. It seems to us that this is extremely slippery from the ethical standpoint and not very effective in practice. This approach would mean that if a citizen had a large sum of money it would put him in the position of a potential criminal, which violates the basic doctrine of our law--the presumption of innocence. If applied in practice would this path not lead to legitimized suspicion, investigation and an influx of anonymous letters?

I know a worthy person who has a million rubles. So what? Take the million away? Or should he be permitted to purchase a second automobile (say, for his son), while other people who are not so worthy are forbidden to do this?...

Moreover, any citizen can say that he has gained money from a state loan, or from a sports lottery or at the races. What then? Should one demand information about the horses he bet on or the number he guessed in the sports lottery?

No, we must find a scientifically substantiated and practically effective economic means of fighting against ethical violations, a means of eliminating the economic causes of abuses and crimes. To do this we must properly utilize in practice the law of value and of the price mechanism.

We have known since grade school that the price is a monetary expression of the value of a commodity. But the concrete price of a given commodity reflects not a category, but a measure. This concrete price cannot reflect such an abstraction as a value which is universal in nature. The price is a unit which is localized in a given time and a given place, for a particular economic and also social situation.

There was a time when we assigned a very small role to the law of value--an accounting category, and the retention of money was explained by the difficulties in accounting for the value directly in labor indicators. In reality the law of value presupposes the utilization not only of the accounting function of the price, but also the distributory and stimulative functions. And the distributory function, when properly controlled on the basis of the law of planning, will serve as a powerful means of establishing and maintaining proportionality in the process of distribution as well as a means of eliminating shortages.

In particular, one can point out such a method of economic control of the distribution of goods as the establishment of prices which correspond to the market demand, if they do not pertain to the necessities. Another method is differentiated prices for rush orders for goods or services. The first method, when applied in trade, led to a considerable reduction of speculation in furniture, jewelry and carpets; the shortage of coffee was eliminated, and perfumes are always available for sale.

The second method--the rush order--is applied in the sphere of services (dry cleaning, shoe repair), in passenger transportation (taxis, air travel) and in some other places. It is being applied not unsuccessfully, but too timidly, in our opinion.

But still it would be possible to submit a rush order for any object that is in great demand and, naturally, not a necessity. If it were possible to freely purchase such goods in a state store with a legitimate documentation of the increased price, tomorrow nothing would be left of the entire firmly established band of speculators. And it would not be necessary to forbid officials to purchase items that are in extremely short supply for fear that they would be resold.

A similar system of rush orders is also possible in the book market, taking into account the difference in the nature of the commodity. If one establishes an additional payment for guaranteed home delivery of a previously ordered book immediately after its publication, probably a good proportion of the copies would be purchased at these higher prices, and precisely that proportion

which is now sold on the black market. In addition to this it would be possible to produce 1,000-2,000 numbered copies with an improved design, on good paper. At one time, I remember, there were such editions and they enjoyed a certain amount of success. But as for books, here the accounting function of the price does not work: the extremely high profitability of book publication is the result of erroneous accounting, for the value of the paper is determined in calculations from extremely reduced prices which do not reflect the profit factor and do not take into account the effectiveness of the imported equivalent when paper is purchased abroad.

The stimulative function of the price also frequently remains beyond the existing economic mechanism. For example, the profit of the Fizkul'tura i sport Publishing House in 1981 amounted to 5 million rubles, which is considerably more than the plan, but the material incentive fund remained at the plan level, 80,000 rubles--only 1.6 percent of the profit, which was not even enough for the extra benefits. In the following year the motivation of the workers of the publishing house to obtain profit decreased appreciably.

Of course it is clear to the readers that we are not speaking about raising prices of training, political or education literature, that which is not an object of speculation. But one must not forget that publishing activity is in the area of material production and follows its objective laws. The fact that the products of this branch serve directly social purposes and contribute to raising the moral level is another conclusion in favor of being strictly guided by economic laws and not ignoring them, as is sometimes the case in the sphere of distribution of book products.

Perhaps not all readers will agree with us. The State Committee for Publishing Houses, Printing Plants and the Book Trade will probably find arguments in favor of maintaining the existing policy. My acquaintance the book speculator will probably be angry and break off diplomatic relations with me. It is not impossible that certain officials will be unsatisfied. The author admits that in some ways he is incorrect, but he is prepared to defend his point of view and suggests conducting a small socio-economic experiment. It is necessary to choose from the books on chess that will come out in 1984 one which clearly belongs to the category of publications that are in increased demand, which is not easy to purchase in a store "simply because that is the way it is."

I suggest establishing a price for a rush order--say, for the basic price plus an addition, through the efforts of the Fizkul'tura i sport Publishing House, bypassing the book trade organization. The book will be sent C.O.D. in response to a post card from the client or he can send a postal money order. Collective money orders from clubs, chess groups or other organizations will be accepted. One can raise the price even higher by stating that the book will be autographed by the author.

The trade rebate will be at the disposal of the publishing house, the planned profit (based on the release price of the publishing house) will be transferred into the budget, and 50 percent of the difference between the price of the rush order and the base price will also go there (minus expenditures for the delivery of the books to the readers). The second half of the additional profit will be deducted into the incentive funds of the publishing house; the trade rebate from some of the copies sold by a rush order is included in the results on the books of the publishing house and is distributed according to existing provisions between the budget and economic incentive funds.

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POOR LABOR RECRUITING PROCEDURES FOR NEW PROJECTS REVEALED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 151-158

[Article by V. V. Ustimenko, Cherkassy division of the Scientific Research Institute of Technical and Economic Research in Chemistry: "We Are Luring Personnel"]

[Text] How does one provide personnel for a new plant or factory? This question inevitably arises for managers of ministries and all-union industrial associations and candidates for directors' posts. The planned nature of the Soviet economy, it would seem, would guarantee the stability of training personnel and staffing new industrial capacities with them. But...

But in reality it rarely turns out that way: a new plant is constructed and sometimes the output of products is even assimilated, and only then do they begin to search for the necessary specialists. And what strange pictures appear on the horizon!... The manager who has support among the "higher-ups," manages in the halls of the ministries to transfer workers from the home enterprises, but those who have been done out of their "paternal share," without waiting for good fortune, simply lure personnel from neighboring plants and nearby regions. Youth specialists purchase electronic musical equipment for vocal and instrumental ensembles and conduct agitation in vocational and technical schools that train specialists who are sometimes not in an entirely suitable profile.

The concerns of workers of technical training divisions grow like a snowbank. They immediately create a network for training and improving skills in production: they organize production and technical courses for special purposes, courses for brigade leaders, schools for studying advanced devices and labor methods, and courses for teaching second occupations. A contingent of teachers and instructors in production training is formed. Moreover, the system of occupational training should be equipped with technical means and provided with a training base. But new difficulties are on the horizon: how does one use skilled workers if the industries to which they are sent have not been put into operation? Where do young workers go through their probation? What funds are used to pay highly skilled workers who are idle?

As long as the enterprise is considered to be under construction, not very much is asked of the administration. But as soon as the state plan is established they begin to lure highly skilled workers of general occupations from enterprises not only of the given city, but also of the region. They rely on such trump cards as housing, high wages, prospects for growth and skills and in the job, and moral stimuli.

But let us take a look at how the managers of these enterprises, within the framework of existing legislation and demanding public opinion, manage, in spite of considerable mistakes in the prestart up period, to create reserves of material and labor resources.

Housing

The primary significance of this factor is confirmed by sociological research; managers of facilities that are under construction also know this.

And so, in a certain city which has other industrial facilities a new plant is put into operation. What do its managers do in order for workers of the plant to have priority over workers of the surrounding new construction projects in acquiring housing? They put special forces to work...

The first thing: for financing construction of the housing. Of the overall complex for facilities for housing, socio-cultural and domestic purposes, they are most willing to finance the first. The construction of stores, cultural institutions, recreation places, dispensaries, and medical institutions stops with the fundamentals, and in order to make sure that the supervisory agencies do not cause trouble, they do the following: at these facilities for a year or two they give the appearance of fervent activity--the voices of Alla Pugacheva and Bakhtang Kikabidze ring out from the loudspeakers, the lights burn in the dayrooms, and the rumble of automotive transportation can be heard. But the wage fund for constructing these things is spent on the wages of the builders who are constructing the same housing at the other end of town.

The second thing: mobilizing labor resources at new construction projects. The construction of facilities for auxiliary business develops "temporarily." The workers of construction specialties are sent to construct residential buildings. Along with skilled builders, auxiliary plant workers also work on the housing and in our day--also members of the families of the future new residents.

It is necessary to discuss the last phenomenon in greater detail. Undoubtedly the reduction of the influx of labor resources has forced us to search for new forms of enlisting the population in the construction of housing. After all, we construct more than 500,000,000 square meters of it during a five-year plan. It began with enlisting the new residents (during nonworking time)

in unskilled construction labor, taking into account the sizes of the dwelling spaces they were to acquire. The person who was supposed to acquire a one-room apartment would have to work 100 hours, gathering up construction wastes, washing the floors, putting glass in windows, and so forth; a two-room apartment--150 hours; and a three-room apartment--200 hours. Then this level was raised to 200 hours, regardless of the size of the dwelling space that was to be acquired. But the managers of the "busy" plants go further. They enlist the future residents for construction even during the work week. The time keepers give them eight hours on the job, but the future new resident during this time is working at a construction site several kilometers away from the shop. Frequently one or two adult members of the family, who are sometimes not workers at the given enterprise, help in constructing the house. They also take advantage of trade-union vacations and absences, sometimes without the permission of the administration of their enterprises. Thus, the "initiative" used for new construction causes social harm to the home enterprises, by using their work time and the recreation time of their workers for constructing their own housing.

The third thing: the material and technical supply for construction. This point reverberates with the first, since the supply for construction sites is preceded by financing. Nothing comes out of nothing... And so, construction materials, technical equipment and machines along with the people have started to come from the facilities for social and cultural purposes to the construction of housing, and at the construction sites, housing construction combines and plants for reinforced concrete items, brick and other materials of the city's construction industry sometimes disappear without a trace. Without a trace in the reports of these enterprises and new construction projects of the city, but the zealous supply workers of the plant that is under construction know where they are. The loading and transportation of construction materials are carried out, as a rule, under high, job-rate orders, and who would refuse the additional incentives for their own collective as a result of someone else's wage fund?

And the rumors spread: here Ivanov, who works at the plant that is under construction, received an apartment within a year, and you have been waiting for three years now, and you still do not know when you will get one... And the labor resources go to the place where the residential buildings are growing up like mushrooms. And the regular staff no longer takes people they do not need, they want specialists of the necessary occupations!

High Wages

The person who works well is rewarded according to his merits. The wage level remains an important, but not the only criteria for selecting an occupation or selecting a labor collective. And the managers of the plant under construction, as usual, rely only on the material aspect of production. If the average earnings at our plant are 40-50 rubles higher than at other newly constructed facilities of the city, people will come to us--this is their credo in the area of labor organization and wages.

But how do they achieve this? For the wage fund is strictly limited, and one cannot place special hopes in the generosity of the main board and the ministry.

In the first place, the wage funds are redirected. The title list of facilities of the first section includes shops and productions with the greatest labor-intensiveness of the output of products, only part of them are put into operation on time, and the wage fund allotted for labor-intensive products, is transferred to shops that produce products that are basic and important to the national economy but are still less labor-intensive. In a year or two the workers of these shops "eat up" half of the wage fund of the labor-intensive productions that are constructed. The worker receives as much for the work he performs as is allotted to his nonexistent colleague in the shop that has not been constructed.

In the second place, in addition to payments from the wage fund, all material incentive funds under the item "fulfillment of especially important assignments" are spent completely, which never happens under the conditions of an enterprise that is in operation. The pens of the plant division of labor and wages submit a string of bonus proposals toward economizing on raw materials, processed materials and electric energy, whose purpose is to create a stable "pumping" of material incentive funds into the pockets of their workers for achievements which hardly require incentives. And again the rumors: this Petrov went to the plant that is being constructed and immediately began to receive 50 rubles more.

Prospects for Growth in Skills and Service

More and more significance is being attached to training, retraining and increasing the skills of workers directly in production. But what kind of "contribution" to solving this problem is made by the inefficient administrators of certain new industrial construction projects?

In the first place, they use the assignment of skill categories. If there are several new industrial construction projects in a city, certain workers of personnel and technical training divisions think, all other conditions being equal, they will go to the place where it is easier to pass the exam for a higher category. And therefore the qualifications commission operates in such a way that, except for the "technical safety" section, practically nothing is asked of the person who is being examined, he is certified for the category, and sent to an industry about whose technology he sometimes does not have the foggiest idea.

In the second place, apply on-the-job training. Up to this point the enterprise has been permitted, through the authority of the head engineer, to establish training programs in the occupations that are specific for a given plant. Certain administrators can also do this. But they reduce to a minimum the theoretical training, and the on-the-job training is conducted in a purely individual form, "under the supervision of Uncle Vasya." Hence, the apparent easiness of occupational training.

In the third place, they establish low requirements for discipline of the training process. Based on the latest achievement of psychology and pedagogy and equipped with a modern material base, the training process for preparing and increasing the skills of workers in production presupposes active collective participation of the trainers, a serious theoretical base and mobilization of practically all the labor skills. But the training process that is organized at "busy" enterprises with reduced programs and with individual training of trainees is inevitably left to fend for itself. The collective is not obligated to do anything and the trainee who is left to himself assimilates from the training material only that information which will help to avoid emergency situations. And again the grapevine goes into operation in the city: at the start up plant, Sidorov reached the fifth category in two months and is living in clover, and we have studied so hard for the fourth category that we still see formulas in our sleep... And again some begin to think.

Moral Stimuli

Those who have been in charge of the start up of a new construction project know that sometimes moral stimuli have done what could not be done with money. One hears of this even at "disastrous" projects. And they are quickly organized.

The first thing: early start up of facilities of national economic significance. If things are difficult everywhere there is no occasion to rejoice. But if things are worse almost everywhere but in some places they are good, then this is wonderful--this is the formula in which many unconscientious administrators of start up facilities place their hopes. Therefore, they throw everything into one of the production sections: money, technical equipment and people. An unprecedented hullabaloo is raised around this project. They send to the ministry, the local soviets and the management agencies a commitment to put it into operation ahead of schedule. They publicize this through television, radio and the press. All the construction sites are decorated with banners: "We commit ourselves to finishing ahead of schedule..." They hope that this will help to conceal the overexpenditure of the wage fund, the reprimand for the failure to start up the entire project, the poor utilization of construction equipment and materials, and the breaking down of sets of production equipment. And, unfortunately, this sometimes succeeds.

Second: competitions for "the best." Even if things at the unready new construction site are not the best, why not bring to the plant the promise to become "the best"? The role of workers' competitions is valued at other enterprises besides the leading ones. These competitions are not ignored even in places where everything is bad. But how can such competitions lure people to a plant that is not meeting the schedule? The fact is that at these enterprises they organize a relatively large number of competitions of the type "best young..." The conditions of the competition are arranged at the plant,

without taking into account the highest achievements in the branch or the requirement--in terms of the level achieved at the enterprise. The possibility of winning and being at the center of everyone's attention is within the power of everyone.

Third: "creative" undertakings of the plant workers. The possibility of creative growth also affects the selection of a job to a certain degree. And, taking this into account, certain plants that are under construction frequently engage in the organization of vocal-instrumental ensembles and tuning musical instruments along with constructing shops and adjusting equipment. They prepare costumes for ballroom dancing competitions for the right to enter class "B"--and they forget about industrial aesthetics in the shops that are being constructed, where products of the highest quality category are to be produced.

Youth typically look on the bright side. With this attention to the individual, there can only be one conclusion: if a portrait of Fedorov, whom nobody even recognized at his former job, now hangs next to the central movie theater on the honor board, and Fedorov himself beats his drum in a group called "Grinding Wheels"--it means that we must go there too.

I have written, exaggerating somewhat, certainly not about all new construction projects. We have many of them which provide an example for all the rest. What a good example is provided by the creation of the Volga Automotive Plant! But there are still many examples which have given rise to the observations presented here. I hope that with time there will be fewer and fewer of them.

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JOURNALIST PROFILES PLANT DIRECTOR'S CHARACTER, PROBLEMS

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
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[Article by Al'bina Afonina, journalist (Kiev): "Responsible For Everything and Everyone"]

[Text] On the day of my first visit to the head plant, the association's collective was awarded the Challenge Red Banner of the ministry and the central committee of the branch trade-union for its work in the first quarter of 1982. This was not the first time it was awarded. It was placed in reliable hands.

There is perhaps not a corner of the country where the Kievtraktorodetal' production association does not send its products. Among its clients are the Minsk motor plant and the Volgograd, Kharkov, Altay and Kishinev tractor plants. More than 70 countries of the world are using technical equipment in which are installed components and parts which are manufactured here.

There are 11,000 workers. The list of items include cylinder sleeves, crank case blocks, pistons and piston pins for tractor engines, hydraulic reduction gear shafts for the T-150K tractor, transmission boxes for the KUF1,8 mower-pickup-crusher, reduction gears for mechanizing labor-intensive processes in animal husbandry...100 different items. More than 50 percent of the products are produced with the State Emblem of Quality. In terms of the volume of production of cylinder sleeves (the main kind of product) Kievtraktorodetal' holds first place in the country and third place in the world.

During the past two five-year plans the shops have introduced 75 progressive technological processes and installed 480 automated machine tools (440 of which they developed themselves) and 70 automated lines (62 of which they also developed themselves).

Accelerated introduction of new technical equipment and advanced technology is determined largely by long-standing business contacts between the plant and scientific research institutes. Especially large changes have taken place in recent years in smelting production. For the first time in the country the dosing and pouring of the liquid iron was automated when manufacturing cylinder sleeves by the centrifugal method. For the first time in

the branch and in the country all operations for processing the cylinder sleeves were automated. It is precisely here that they installed the first models of the line for processing pistons and the first automated tempering equipment. And many other things were done, developed and introduced at the association before they were at any of the related enterprises.

This is the situation today. But the "portrait" of the enterprise would be idealized and the figure of the director which stands behind it would be lacking many important features if we did not look into the past.

Nobody Envies Him

At the plant they do not like to recall how it was before. It was hard.

"But why? What was the problem?" I asked the deputy head engineer, P. I. Zagorovskiy. Pavel Ivanovich is a short, active person who is always wearing a beret and a suede jacket. He has been at the enterprise for a quarter of a century. He answers:

"Well, if we start from the very beginning, it was a difficult time and the plant was being constructed. The state assignment was not being fulfilled. For a long time we were the talk of the town. Everyone was against us: we dreamed of providing ten thousand spare parts for the country's fleet of tractors. What a job! Not only did we fail to deliver them, but also there were so many complaints... Then a new director came, Petr Yakovlevich Kostyna. He was a strong leader. He replaced all the management personnel. He installed young, capable engineers. He may not have made a single mistake here. Many of those who were promoted at that time today hold management positions at other plants and in state and party agencies. So Kostyna was not afraid of taking risks. He created new shops and he had great intentions. But they soon appointed him to the Sovnarkhoz. Then, on Kostyna's advice, they appointed Valeriy Filippovich Zlobin as director. He had been the head engineer under Kostyna."

Pavel Ivanovich was silent, and then began to laugh.

"Few would have liked to be in Zlobin's place at the time. In the first place, it is always difficult to work when replacing a strong leader. In the second place, Kostyna had begun a great deal, knowing how to continue, what to get and where, how to "scare things up," and whom to convince... But what was Zlobin to do? No, nobody envied the new director!"

That was 1965. Then, in March, there was a Plenum of the CPSU Central Committee, which set as broadly as possible the task of technical re-equipment of agriculture. The degree pertained directly to the plant. The fleet of machines in rural areas grew, and the demand for spare parts for them increased.

But the plant was drowning in defective work. It was being choked by illness, poor labor productivity, outdated machine tools and backward technology. The work was difficult and dirty, there was a lot of manual labor, and the working conditions were poor...

And the people did not stay long. And is it really possible to solve serious problems without a stable collective? Labor turnover was more than 23 percent since that time it has dropped to one-third the former amount. Could a person work long if, in addition to heavy labor there were no prospects for housing? They hired newcomers. And what is a newcomer? He is a potential slipshod worker. As soon as he learns anything, he decides to leave.

It was necessary to have a stable collective.

The plant manager formed an entire program of action: to ease working conditions, to give the workers housing, to give their children kindergartens, and to raise wages.

Zlobin was the first to understand that even this was not enough. There would still be no great influx of labor force. For next door were plants where people worked in white smocks, in clean areas, where flowers were growing. No, more was needed than to create conditions for the worker in order to retain him; it was necessary for the worker himself to become a participant in the re-equipment of the plant--a creator, for the plant to become his own, and for his work in it to be pleasurable. This is something more difficult than simply working conditions or simply housing...

Automation and mechanization!"Zlobin emphasized at each meeting. They began to figure things out. It turned out that with the funds it was possible to acquire automated lines and special machine tools...ten percent of what was needed. But where were they to get the other 90 percent? For example, they needed 500 pneumatic distributors, and the territorial material and technical administration allotted the plant only ten.

But the collective had already acquired a taste for searching.

The Winner Is The One Who Looks Ahead

I heard from someone that it was precisely at that time that creative brigades appeared, and this was the idea of the director Zlobin. But today he says:

"Nothing of the kind. The initiator of the organization of creative brigades was the chairman of the trade-union committee, Volchok. She is one of our really good people. So much energy and imagination!"

Leokadiya Bronislavovna Volchok is now the secretary of the party committee. She has been working at the enterprise for 24 years. The many problems which she must solve every day have taught her to embrace the essence in a moment, and to answer briefly and to the point. Busy as she is, and, let us say directly, her load seems to be beyond a woman, she has managed to remain feminine and elegant.

"Perhaps it is not important who was the first to suggest forming creative brigades," she remarks. "The main thing is that the director supported it. Now we have 22 of them. We have organized competition among them. The economic effect from the introduction of inventions and suggestions which originated in these brigades has amounted to 640,000 rubles a year. But the best thing of all is that the workers participate in creative work along with engineering and technical personnel."

The creative brigades have changed the plant atmosphere a great deal. Automation and mechanization at the plant have gradually become the business of the entire collective. Shortcomings and "bottle necks" were not concealed, they were discussed openly, and they were included in the list of immediate business.

This example tells of the possibilities of a creative brigade that consists of workers and engineering and technical personnel. The cylinder sleeves of tractor engines were ground on various machine tools and the parts were delivered by hand from one machine tool to another. The casting weighs twelve kilograms. It was necessary to move tons each shift. During a short period of time the creative brigade, through its own forces, designed, manufactured and put into operation several automated lines which replaced the machine tools and eliminated the movement of parts among them. As a result, labor productivity for lathe grinding of the sleeves increased by twenty percent. Or another example. Honing the sleeves was a serious problem. Every fifth one was rejected. It was necessary to replace a manual installation with a more precise automated one. This problem was also solved. Now the rejections amount to seven-eight percent. Judging from published figures, this is two-thirds of the amount at the best foreign enterprises.

The master of the smelting shop, A. I. Shevchenko, could not be at peace with the high percentage of rejected work. After unsuccessful attempts to solve the problem under the conditions of the plant, the master made an unexpected decision: he decided to turn to science. Zlobin did not object: "Just return with a final solution." And the master returned, now as a senior scientific associate of the Scientific Research Institute of Smelting Problems of the Ukrainian SSR Academy of Sciences. Now centrifugal pouring of the sleeve with synthetic flux reduced the defective work from fifteen-eighteen percent to four percent.

One cannot but discuss one other creative brigade. In cooperation with scientific associates of the Scientific Research Institute of Problems of Smelting of the Ukrainian SSR Academy of Sciences, engineers and workers of the head plant automated the dosing and pouring of liquid iron when manufacturing cylinder sleeves by the centrifugal method. For the development and industrial assimilation of principally new magnetodynamic doser-pumps ((MDN) for automatic pouring of iron into smelting forms, workers of the plant--general director V. F. Zlobin, the deputy head engineer, P. I. Zagorovskiy, the deputy head metallurgist, G. K. Golubchik, the design engineer, V. V. Kulik and the smelter, V. G. Galushka were awarded the State Prize of the Ukrainian SSR for 1979.

This technological process and equipment have no analogs in world practice, and in terms of its parameters the magnetodynamic pump surpasses the foreign models of mechanical, pneumatic and electromagnetic installations which we know of. The doser was demonstrated at an international trade fair in 1979 in Hanover and received a high rating from specialists. Many foreign firms were interested in the innovation. Representatives of the Hungarian firm, Nikeks, the West German firm Krupp, the French firm Four, and the Czechoslovakian firm Achrostroy Yichen came to familiarize themselves in greater detail with it.

As for our country, we decided to put the MDN into series production. So the problem which Zlobin and his colleagues solved for themselves was also solved for the country's entire smelting industry. Incidentally, the general director has several dozens of authors' certificates for invention, and almost all of them have been introduced in shops of the association.

At that time, when the plant imeni I. I. Lepse (now the head plant in the association) was being discussed everywhere, its comrade in misfortune was another Kiev plant. The Lepse workers followed a course toward automation and mechanization, arranged contacts with scientific research institutes and brought themselves up, and this plant even now, as we say in the Ukraine, is still ahead of the rest.

As early as May 1979 the association fulfilled the five-year assignment for increasing labor productivity. It is now cooperating productively with 24 scientific institutions. It is working with them on 32 subjects.

It is difficult to overestimate what has been provided by the association by the close contact with science and the introduction of new technical equipment. For at the beginning of this path, many did not believe there would be success. They said: "The plan is not being fulfilled, the work is just being started, and Zlobin is thinking about science, he has transformed the plant into a branch of the scientific research institute..."

The same handwriting of the director can be seen if you look farther back--to the years when the association was created. In 1972, when things were going better, the collective was stabilized and everyone breathed more freely, it never entered anyone's mind to join up with any enterprise. Why? Zlobin understood that it would inevitably be necessary to increase production capacities, but how? For there was nowhere for the plant to grow; there were residential districts all around. This meant that it was necessary to search for new living space...

I was told about this time by P. I. Zagorovskiy, the deputy head engineer:

"Zlobin called me into his office for some reason. I arrived. He said he wanted to go and look over the branch. What branch? He was silent. He took several other people with him and we left. We arrived in the district of Shepetovka. There was an immense tent; a slaughterhouse had been there previously. 'This is our future branch. There will be a plant for tractor bushings here,' said Zlobin."

They did not understand him at that time. They argued the whole way. Why was this necessary? Insanity! Soon it will be necessary to ship things in, it is difficult even to imagine the material expenditures, and what is the advantage? But Zlobin was able to see farther than any of us.

Indeed, Zlobin is able to rise above the purely plant interests and look at things in a statelike manner, on a large scale.

And what happened? The first section of the new plant was planned for start up in 1974, but through joint efforts it was started up in 1973. The bushings were all transferred to Shepetovka, and the plant imeni Lapse was able to increase the output of the main product by two million rubles a year. The plant was gradually transformed into an association. But if Shepetovka was, as it were, an idea "from below" the Konotopskiy joined in "from above." The Lapse workers helped the Konotopskiy workers to construct the buildings, transferred equipment and fittings, provided them with castings, and trained the personnel. The Konotopskiy plant began to produce products three years ahead of schedule.

But the internal plant problems are not so narrow either. When solving them too, it is necessary to be able to see into the future, to be able to swim against the tide, to be able to evaluate and support the initiative from below. Thus, there was a suggestion to combine the mechanics shops for producing pistons and bushings. This is easy to say, but what will it provide? Fewer engineering and technical personnel and auxiliary workers? Good. But is it good for those who will have to transfer to another shop? They did not disregard the suggestion, they studied it, they calculated everything and understood that it was a worthwhile matter.

Once the senior master of the section, Nikolay Dmitriyevich Bil'ko, read in PRAVDA about the brigade contract at one of the Perm plants. He especially liked the fact that the brigade was given freedom in the utilization of technical equipment and the wage fund, and in the organization of labor. He wanted to try it himself.

"I went to Zlobin during his office hours. I said let us try this in our section," said Bil'ko.

"But why did you go right to Zlobin and not to the labor division?" I asked. "Or to the shop chief?"

"You understand that there were only three months left until the end of the year, and this was a new form of labor organization... It was necessary to take a risk. And I was convinced that it was a necessary matter, but who would take the responsibility? Zlobin immediately accepted my suggestion. And imagine, everything turned out all right. The plan for 1976 was not only fulfilled, but overfulfilled. In 1977 our plan was already for 55,000 pistons,

and in 1978--62,000, but in 1982 it was planned for the section to produce 95,000... You know, for any initiative it is very important to have the confidence that your suggestion is timely and advantageous to the plan, the director will always support it. Each of us has this confidence!"

He came to the plant in 1957. He worked for two years as a technologist, a year as the chief of the technical bureau, and then as the deputy head engineer, the head engineer and the director (he was 33 years old at that time), and since 1972 he has been the general director. Someone said: the fact that Zlobin knows all the minute aspects of production makes it more difficult for him to lead...

"It Is Better That I Lose Than the Production"

There are no free "spaces" on the agenda of General Director Zlobin. Either he has trips to the branches or a reception of foreign delegations. The deputy of the republic supreme soviet, a member of the commission party committee for technical progress, the chairman of the commission for the development of Kievlit'ye smelting production, the chairman of the association's technical council...the day is scheduled right down to the minute. Finally I heard: "The general director will be able to speak with you on Saturday."

A tall, youthfully built man, he arose and invited me to sit down. He looked attentively and said:

"May I help you?"

And this was not simply a phrase. He was preparing himself to listen attentively, to answer, possibly to argue, briefly, to work with a journalist.

"We have talked and I myself have become convinced that you sometimes do work for others. Why?"

Valeriy Filippovich smiled, thought, and then answered:

"You are 100 percent right. Yes, sometimes I have to do the work of others. There are two reasons for this, but they are quite different. Here in this office we wrack our brains with the head specialists over some problems. The telephone rings. They ask for an immediate meeting on the question of removing the snow from the street next to the plant...or there is another urgent meeting about registration in the dormitories. You think, maybe I do not have to go? No. I have tried sending my deputies and division chiefs. This is perceived as neglect and then there is unpleasantness... This is one of the reasons, so to speak, external ones, why I must handle business that is not always my own. The second reason is our plant. Certain specialists are not qualified for their positions. You say, replace them with better ones? Yes, but time is needed for this too. People grow in the association. Everyone who is working well has the prospect of growth. I could name Sergey

Vasil'yevich Filippenko who has advanced from a polishing and grinding machine operator to a production chief, or Ivan Savranchuk, who began as a worker and is now in charge of a shop. The same position is held by Ivan Ivanovich Podkolenko, who was formerly an electrician. But there is a shortage of certain specialists. What can you do--you take care of them and sometimes you yourself have to step in. But I do not look after those workers who can solve the problems themselves."

"But is there enough time in the day?"

"Of course not. Eight hours are not enough for me. This is bad. But it is better to sacrifice myself than production."

"Do recommendations from the theory of administration somehow help you in your work?"

"Undoubtedly. One can no longer do without them. Incidentally, I do not always agree with the authors who refer to foreign practice. For our managers and foreign ones frequently are solving opposite problems. We do not have enough specialists, and there engineers cannot find work. The foreign manager is worried about where to get orders from, where to sell products. That is the main thing for him, but this is no problem for me because it is planned on a state level."

The telephone rings. Zlobin takes the receiver. It is a conversation about normative net output. The general director thinks that the economists of the association are taking their time.

"They are too slow in developing brigade organization of labor as well," he says to me. "Let there be fewer brigades than we need, but they should be autonomously financed, fully authorized collectives."

In the general director's office next to the map of the plant territory is a water color, a smelter is pouring metal into forms.

"Are you looking at the water color? It is a gift from our friends from the GDR. We concluded an agreement with them concerning technical cooperation in the creation of an automated installation for casting sleeves."

Later I asked some specialists about this. The firm purchased an insulation from the FRG, but it did not prove itself. But they did not want to abandon the idea of centrifugal chill casting. They shared their ideas with their Soviet friends. Zlobin immediately suggested that they do it themselves. They concluded an agreement for joint scientific and technical work. Their colleagues from the GDR conducted research and studied the technological processes of centrifugal casting of sleeves in chill molds which exist in world practice, and they studied the composition and technology for manufacturing thermal insulation materials of the chill mold, and they also

developed blueprints for its design. The results of the research were submitted to the plant imeni I. I. Lepse, and an experimental installation was manufactured here. First it was rejected, but then it was improved: they suggested a ten-position dual design, which made it possible to obtain two castings at the same time with one cycle. The installation was put into production both at our head plant and in the GDR. Its productivity was 110-150 castings per hour. In two years this method was used to manufacture three million castings. Before the end of the five-year plan, the association intends to start up another eight such installations.

"Do you frequently have occasion to go abroad?" I asked Zlobin and recalled discussions with his coworkers about how attentively he listens to explanations at international exhibitions and how vitally interested he is in everything that he can use himself.

"Yes, I do," the general director confirms this briefly.

He has been in Canada, Portugal, France, the FRG, Romania and other countries. In fact, it would be no exaggeration to say about Zlobin: "He knows how sleeves are made throughout the entire world..."

"Your attitude about an arbitrary manager. Remember Cheshkov in Dvoretzkiy's play?"

"At some time and in some place such a manager was probably necessary, but I would not offer him a job. I can say firmly that we have none of these in the association. Every worker has his own character, his own tastes and his own shortcomings. And the manager should take this into account."

"Yes, but the manager is also a person."

"Quite true. Sometimes it is difficult for me to be calm, restrained and polite. When you are worried about something and suddenly you come up against poor work or, even worse, indifference... But I know that a humane attitude toward a worker does more than the strictest orders."

"A humane attitude towards the worker"... For Zlobin, these are not simply words. Efficient labor organization. The solutions to those production problems which make the work interesting, creative and gratifying. Constant attention to social problems. All this together constitutes an entire program. It is precisely here for the first time in Kiev that they began to construct buildings of the hotel type. Young specialists and young wives receive a room with all the conveniences, but they are not removed from the general list for apartments. When their turn comes they receive an apartment, and another young married couple or young specialist takes over their room. In general Lepse workers are fulfilling the plan for the construction of housing by 300 percent. "We are motivated, and we must build, and the builders will help us," this might be necessary, but it is also the realistic position of Zlobin.

He devotes every Wednesday to construction, beginning the morning with traveling around (himself behind the wheel) to all the facilities and certainly to the recreation base, Osokorki: he is very impatient to have the families of workers be able to rest on the picturesque bank of the Dnepr as soon as possible. At two o'clock there is a conference on construction. There is always the same question: "What has been done during the week?" And here nobody can misinform the general director: he has seen everything for himself today.

And along with this uncompromising demandingness is an unchanging benevolence, a readiness to help. Obviously everyone should have these character traits. But it is so important for a manager to have them! For the so-called microclimate is created by people, and above all, by managers. And a good mood is also one of the reserves for labor productivity.

"You ask about 'arbitrary' management? I am well aware of that in myself. The director, like any other worker, must subordinate himself to discipline. Moreover, he must provide an example. I subordinate myself as well. Thus, in my opinion, it is necessary to review the requirements that are placed on us more frequently. I am the general director of an association, and it is more clear to me where to use funds first, and where a return will be obtained more rapidly. But I cannot do very much: there are limitations on all sides. Just take construction. The course of it is planned from above, although the planning agencies in the ministry do not have precise information either about the real possibilities of construction organizations or about the degree of readiness of the facilities. Hence there are obvious mistakes in the distribution of capital investments among clients of the association. The construction readiness of the machine building at the Konotopskiy plant made it possible to complete it and put it up into operation in the second quarter of 1976, but this facility was not included in the plan. The start up of a building that was practically ready was unjustifiably delayed. Another example. Branches received material and batching items through the head enterprise. This means that everything needed for Shepetovka goes to Kiev, it is unloaded here, and then it is loaded again and sent out... back to Shepetovka. Stupid? Of course! But they make me do it."

And, as a kind of summary of his thoughts, Zlobin decisively proclaims:

"No, it is necessary to increase the role of the general directors. It is necessary to entrust more to them!"

Valeriy Filippovich speaks fervently. He speaks painfully about what he saw at one steel smelting plant: when rolling sheet metal the automated machine cut off the ends with dimensions of one meter by one meter, and these immediately went to waste. And the Lepse workers need this metal for their basic products.

"But why talk about other plants, we can just look at our own," Zlobin interrupted himself. "If the division for technical control rejects a part,

it is immediately discarded, but this part could be used at many plants and shops where they have lathes. Frequently they make a spare part out of the first piece of metal they get. The brand of steel is not right, and I will not even mention thermal processing. It cannot even be compared with a part which we reject. And if they were to take them from us as second grade, what a savings there would be! Or this question: six plants of our main board make sleeves, and each in its own way. The difference is found in the labor-intensiveness, metal-intensiveness and percentage of rejects. Why not take all the best, put them together and introduce them? The exchange of new technical ideas and decisions is arranged unsatisfactorily, in my opinion. If advanced technology were promptly transferred from one enterprise to another, this would produce millions of rubles of profit for the national economy.

Listening to Valeriy Filippovich Zlobin himself and the stories about him, and becoming familiar with the Kievtraktorodetal' association, one automatically becomes wrapped up in the passions, affairs and plans related primarily to the technical development of the enterprise. And one immediately becomes convinced: yes, they need new technical equipment, but they are more in need of creative brigades which create it and, to a certain degree, they create themselves. And it is still always necessary to have sober economic accounting, a well-founded approach, the ability to change the situation for the better, and to select from the many variants of production life precisely the one which will lead to the goal most quickly.

V. F. Zlobin has this ability completely.

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MANAGER DEPLORES WASTING WORKERS' TIME ON NEEDLESS DUTY

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 172-175

[Article by F. S. Besnin, chief of the technical division of the Kurgana Production Association of the Dairy Industry: "Are Mechanics and Electricians Needed as Attendants?"]

[Text] Shops attended by only one person have been in operation for a good ten years now (see EKO, Nos 2 and 4 for 1982 and SOVETSKAYA ROSSIYA 17 October 1982). These are usually specialists from a former brigade of attendant mechanics or electricians. At one time they have undergone retraining and acquired a permit to work on electrical installations, they are able to adjust and repair automated equipment and so forth. Even when they were being retrained they were warned that in their shop and at the facilities of which they were in charge they were the complete masters, they themselves were the directors, they were the yardmen, painters, plasterers and so forth, that they must follow on the heels of the mechanic or the head of the enterprise, and that they must do everything themselves, the more so since they and more than enough time to keep the premises and the equipment in order. Practice has shown that this is even better than it was before.

But, strange as it may seem, at these enterprises one can see the following picture: there is a senior electrician or even an energy engineer, he solemnly carried an electric light bulb, and he is accompanied by two electricians with a ladder or without one. They say this is the way it is supposed to be. And indeed the situation is typical of many enterprises. Look, for example, at the forth page of the supplement to the magazine ENERGETIK, No 5 for 1975. Are there not too many energy engineers there?

Having changed the light bulb, the electricians, as a rule, return to their room, which is called an electrical shop, and having smoked a couple of cigarettes, they sit down at the desk to while away the time.

"Boys, why are you not doing anything, why are you not doing repair or preventive work?"

"But we are attendants. If they call us, we will go and change a fuse. So we have everything under control, yesterday and the day before we did not have a single call. Let the mechanic take care of the repair work."

"But why are the electric engines always hot?"

"The women pour water over them."

"Perhaps the thermal protection is not working, the insulation is bad, the terminals are weak, the fuses are too strong?"

"Well, in any case there is nothing that can be done about it. All we have are combination pliers for everything, a broken screwdriver and a half a roll of friction tape--and that is it. We are poorly supplied."

"But who made your screwdriver? And can you really do much with combination pliers?"

"This is quite obvious to the management."

"Perhaps it would be better for them to send you to the shops? You could go to one shop and he could go to another. And there you could maintain the electrical equipment, the wiring and the grounding in good order."

"And then I would have to leave home at night if something happened?"

"Do it well so that nothing happens."

"And what would be the norm, how many electric engines would there be for each electrician? There in the elevator there are only twenty motors for one worker and they work in dry areas, and we have fifty each and it is damp everywhere. If you were to send us to the shops, we would all quit. They would not promote us or give us bonuses."

"If you quit, others will replace you."

"They will not. There is now a shortage of personnel everywhere!"

The mechanics have a different room, which is called the shop, the mechanics room or the duty room. The tobacco smoke rises up to the ceiling; you could cut it with a knife.

"Why are you not working?"

"We are caught up on everything. The equipment is running."

"Why not get ahead by preparing rings, washers, pipe sleeves, taps, couplings, or bushings? Will something not break down suddenly?"

"It will break and then we will do something about it..."

"You should make sure that it does not break."

"But let the designers worry about that. Previously the equipment operated more simply and it broke down less frequently. But now we have rubbish. It has become too complicated: it takes a half a day to remove four heads from a compressor, and you cannot take the entire thing apart in a day. In general it takes a week for repair and with the old equipment this could be done in a day."

"But today you are sitting around doing nothing?"

"Yes, we have not done anything special for a week."

"Why has the feed pump been in repair for a month?"

"That is not our business. They should give us new ones and not take apart the old ones. The supply is poor, and there are no spare parts."

"Would it not be better to assign each of you to an individual section? Then it would be easier to get spare parts, and you would not scatter them about but would protect and restore the equipment."

"They have already tried that. It was not advantageous for us. Then you would not leave the shop for days. But now the shift is over and we must go home."

"Do it well so that you can guarantee trouble free operation not for days, but for a year."

"But who would disassemble and assemble the equipment for washing each day?"

"Teach the equipment operators, that is their business."

"We are not engineers. They have not promoted us for several years."

"But what if there is no work for higher categories of workers?"

"What difference does that make to us. Let them arrange an exam. We will take a test for a higher category. We have many years of practice. Good mechanics are in great demand everywhere now. The world is not large enough in your wet industry..."

All of them are partly right. There are no service norms. The rules are out-dated. The supply is poor. But the main thing is the backward psychology. To employ highly skilled specialists, mechanics and electricians as attendants is wasteful to say the least. This was technically and economically justified previously when personnel who serviced equipment were basically not very literate. Then the worker could not be entrusted with such work as changing a fuse or replacing a gasket on a steam pipe. He would have crawled in to do these jobs without turning off the knife switch or closing the valves.

But now, at the beginning of the 1980's, every machine tool operator has a secondary or secondary technical education. Almost every master or shop chief has a higher education. They have studied hydraulics, electrical equipment, and mechanics, and I daresay they have received A's in all of these subjects. Why can such a trained specialist not change his own burnt-out light bulb, fuse or washer. No, not all the time but only if it is necessary when the shop electrician or mechanic is not there. And the latter should do their work so well that the equipment operates without breakdown, and if this has happened, the master or the shop chief should have a set of prepared washers, inserts, light bulbs and live fuses as well as the necessary instruments and protective devices.

One should also envision the possibility of raising the category and the wages of the shop electrician and mechanic. But there is one indispensable condition: there should only be one of them. In an extreme case, if there is a large volume of work, one might permit the mechanic to have a student, and the electrician--a trainee.

Then there would be no time for smoking too much, sitting around and other things that accompany inactivity and irresponsibility.

For thirty years in his practical work the author has repeatedly tried to implement this system. In some places it has worked, and even taken root for a while. But new directors came, and they established the attendance system again. Everything went back to the way it was. The reason is that they want to play it too safe, in the event that something happens. There are penalties for idle time in the shops, but not for over-insurance. Even if there were a breakdown or emergency because of "too much oil," that is, if nobody was checking on the equipment at all, it would still be easier for the director: for the mechanics on duty were there. But God only knows what would happen if they were not there!

But somehow it is necessary to fight against this bad psychology. It is necessary to counteract the shortage of labor force by economizing on labor resources.

Electricians in attendance are necessary, but in energy systems.

Mechanics in attendance are necessary, but not everywhere, but in housing administrations, gas and water management and on main pipelines, if they carry out the duties of equipment operators.

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USES OF WRONG INDEXES TO MEASURE MECHANIZATION CLAIMED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 175-177

[Article by A. Z. Yuditskiy, chief of the technical division of the Gomel training and production enterprise of the Belorussian Society of the Deaf: "What is More Advantageous: Sweeping Equipment or a Multipositional Automatic Machine"]

[Text] At the end of the 1950's the USSR Gosplan approved the methods for a consolidated determination of the level of mechanization and automation in machine building. But in recent years branch and regional management organizations have begun to evaluate the activity of the enterprises in the area of technical progress not in terms of the level of mechanization and automation but in terms of the degree to which mechanized labor has reached the workers. Apparently the main reason for the changeover to this indicator is the simplicity of calculating it.

The incompleteness of this indicator is recognized in the methods themselves, but they do not say the main thing: the indicator of the degree to which the workers are reached by mechanized labor not only does not give a qualitative evaluation of the level of mechanization of production, but also exerts a negative influence on technical progress.

Let us try to look into this in greater detail. First of all, what jobs are considered manual? In this case, the measure is the form of statistical accountability No 2, where manual labor occupations are indicated with the indexes "3" and "4," and mechanized labor occupations--with the indexes "1" and "2." I shall give certain mass occupations with manual labor for which the changeover to the category of mechanized labor is impossible or not yet economically expedient:

dock workers and cargo loaders. They have manual labor, regardless of the degree of its mechanization. And still the number of means of mechanization of lifting work (cranes, beams, monorails, loaders, stackers, transporters, and so forth) is increasing fairly rapidly;

mechanic-assemblers and mechanic-electrical installers. Is it possible to mechanize or automate their work? Yes. But at the present time this is not economically profitable in the majority of cases.

warehouse workers. Their labor reminds us of the labor of employees, but they are still included among workers with manual labor;

controllers of divisions for technical control.

On what should technical thought at the enterprise be concentrated in order to increase the effectiveness of production? Is it worthwhile to concentrate attention on the manual jobs we listed above or should one direct ones efforts where it is possible to achieve the greatest return in a short period of time and with the least expenditures? Experience shows that releasing one worker employed in mechanized labor (for example, a machine tool operator) requires fewer expenditures than for a worker in manual labor (for example, a mechanic--fitter or a cleaning lady). The introduction of one combined machine tool releases up to ten workers who previously worked on universal machine tools. Their labor was not very productive, but it was considered to be mechanized.

But let us see what, with the present system of evaluating the technical level of an enterprise, is produced by replacing universal less productive equipment with specialized, highly productive sets of equipment. With the same number of workers involved in manual labor, the overall number of workers decreases and the degree of work included in mechanized labor...also decreases. As a result, the enterprise undeservedly ends up among the backward ones. The same paradox arises when introducing automated sets of equipment, modern forge-press and smelting equipment, and in general any progressive technology which relieves, as a rule, workers who are engaged in mechanized labor.

As an enterprise approaches a level of comprehensive mechanization, the overall number of its workers decreases considerably and labor productivity increases, but the degree of mechanized labor decreases. The indicator, which was completely appropriate when constructing the Belomorsk-Baltic canal, now, during the period of mass automation, is simply disorienting.

In our opinion, heavy and harmful manual labor should be mechanized first of all, even with large expenditures, but the rest of the work for mechanization and automation of production should be carried out in sequence, strictly according to the economic effectiveness. One cannot demand that enterprises give preference to sets of sweeping equipment over multipositional machine tools just because the degree of mechanized labor is unjustifiably raised to the position of the main or only indicator of technical progress.

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NORM SETTER'S DILEMMA--LABOR INTENSIVENESS vs WAGES

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 177-179

[Article by Ye. K. Gorbunov, engineer: "The Norm Setter--Between Intensiveness and Wages"]

[Text] One frequently hears that the norm setter has only one concern--to arrange the norms in such a way that, regardless of the existing organization of labor and its results, it will be decided in advance that the worker will receive the given average earnings. Recognized that the norm is used in order to put a harness on wages, one must not forget, however, that it also serves to eliminate imperfections in the rate system.

Thus with the existing wage rate, the worker should have the same earnings when he has processed a part weighing twenty kilograms as when the part weighs twenty grams; the same when the worker within the norm serves two and five machine tools; when his shift cargo turnover varies significantly. Since the worker sees the difference in the intensiveness of labor, the norm setter is faced with a problem: how does one reflect this in the payment. He can find no other way than to change the norm, to raise it up to the level which provides, in his view, the necessary wages. Because of the imperfection of this approach, it would be good for science to suggest a better way. So what does it suggest?

There are many statements in scientific literature to the effect that under socialism the intensiveness of labor is normal while under capitalism it increases as a result of increased profit. All this is obvious, but what are the absolute amounts?

Economists frequently use the concept of "normal" to indicate an average, socially necessary level. A more practical issue: the normal level is formed as a result of deviations from it, in both directions, up and down. As a norm setter I must know the intensiveness in each job so that the labor of the worker is paid for appropriately. But how does one measure the differences?

In the magazine SOTSIALISTICHESKIY TRUD it was suggested that the intensiveness of labor be measured in terms of the expenditure of oxygen in the human organism, since it is known that when one liter of it is burned, 4.9 calories are emitted. Having established the norms for the expenditure of the worker in calories, one can compare the actual intensiveness of labor with the socially necessary level. But if, for example, the expenditure of energy of the worker when performing his labor functions is lower than when calculated according to the normatives, one can, with figures in hand, justify a revision of the norms and a change in labor organization.*

I would not have the courage to go to a worker with such figures--he would probably think that his norm setter had something wrong with his head. For with the same work different people expend different quantities of energy; the expenditure depends, among other things, on speed and skill. One by the sweat of his brow cannot even do the amount that another does without special exertion. Does this mean that the norm should be raised for the latter, bringing the number of "burned" calories up to the "socially necessary" level?

Incidentally, the latter conclusion is suggested by the assertions of certain specialists who think that the intensiveness need not be measured at all, and that technically substantiated time norms are sufficient. One can hardly agree with them. How does one explain to a worker that according to the norm he previously handled two machine tools, but today he must be given three? That the intensiveness of his labor thus will not exceed the "normal" level? The worker will be impressed. His surprise will disappear only if his wages are increased. Then he will agree: the intensiveness does not exceed the permissible level, but it has increased. Increased intensiveness requires higher expenditures of energy, which are compensated for by the consumption of additional food, and for this one needs money, and so forth. The fundamentals of the workers' political economy are known. But in practice it turns out that the intensiveness of labor is far from always taken into account. The existing rules and provisions that regulate wages do not recognize the need to measure labor in terms of its intensiveness (in addition to such an indicator as time).

It is not difficult to determine the intensiveness of the labor of piece-rate workers since one can find the indicators in the time norm. It is used to establish: the coefficient of employment of the worker (the ratio between the time occupied with active work and the operation time or time of the cycle [cycle for output]); the weight moved during the process of working on an object of labor or implement of production; the shift cargo turnover in kilograms per minute (multiplying the weight of the product manufactured during a shift by the distance over which it is moved by hand). Depending on these indicators, one can differentiate the increments to the hourly wage rate and thus, the earnings.

*See: SOTSIALISTICHESKIY TRUD, 1979, No 11, p 100.

It should be noted that the USSR State Committee for Labor and Wages has taken certain practical steps in this direction. Thus the AvtoGAZ Production Association has been permitted as an experiment to calculate increments to the hourly wage rate depending on the coefficient of employment of the worker in piece-time, the number of part-operations or assembled items processed during the shift, and the complexity of the part or the work. The experiment has been going on since 1972. It would be expedient to consider the possibility to extending it to other branches of industry.

As for accounting for the level of intensiveness of labor when establishing wages of engineering and technical personnel, so far there are no such efficient proposals here.

I should like to draw attention to the need to take into account the intensiveness of labor when differentiating the payment for it. Then the norm setters and the workers would have more open relations. I would feel good about going to a worker with these figures.

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SVERDLIK'S BOOK ON NATIONAL PRODUCT, MONEY TURNOVER CRITIQUED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 180-185

[Review by A. D. Korobkin, doctor of economic sciences, professor, Novosibirsk Institute of the National Economy, N. L. Khal'zov, candidate of economic sciences, Novosibirsk Institute of the National Economy, and M. V. Lychagin, candidate of economic sciences, Novosibirsk State Institute, of the book "Obshchestvennyy produkt i denezhnyy oborot" [The National Product and Monetary Circulation], by Sh. B. Sverdlik, Novosibirsk, "Nauka", 1981, 205 pages]

[Text] The book is devoted to the crucial problem of commodity and monetary balance of the plans for the development of the national economy. Proportionality of economy growth is one of the factors in intensification of public production. "Smoothness of the operation of all national economic units," it was pointed out at the November (1981) Plenum of the CPSU Central Committee, "is becoming an increasingly important condition for the effectiveness of the economy." Coordination of monetary incomes of the enterprises and the population with the material resources for covering them directly effects the effectiveness for strengthening autonomous financing and contributes to improving product quality and increasing labor productivity.

It would be difficult not to agree with the author that "the problem of improving the control of monetary circulation is inseparably related to the overall problem of improving the entire economic mechanism" (p 5). Expanding the horizon of planning, balancing economic growth, strengthening autonomous financing methods of controlling production and, finally, increasing the role of social factors in the development of the economy in the near future will create an even greater need to solve this problem. This far from simple problem is a worthy subject for reflection. And, perhaps, the merit of Sh. B. Sverdlik's book lies not only in the new and interesting approach, but also in the scrupulous demonstration of methodological and informational aspects of research, which gives the reader the opportunity to evaluate the strong and weak points of the author's conclusions and recommendations, and to think about improving them.

The initial methodological point of reference of the research is the provision about a unified monetary system which includes all monetary flows among subdivisions of the public sector and between the public sector and the country's population. Cash and noncash money serve equally the process of socialist reproduction, including the same functions--as a means of circulation and a means of payment. The object of planning and research of commodity and monetary relations in the national economy is, consequently, monetary circulation as a unified whole, and the methods of planning and accounting for monetary circulation should provide for commensurability of its volume and structural indicators with the indicators of the social product.

The book begins with a concise, but pithy analysis of the existing system of planning monetary circulation. The author draws attention to the fact that the most important part of monetary circulation--reciprocal payments of enterprises and organizations--is generally not reflected in the planning and reporting monetary balances of the national economy; the methodologies for planning other monetary flows and material flows that run counter to them are extremely varied.

Economic literature suggests various methods of overcoming the separation of material-substantial and monetary-financial balances, which require a radical restructuring of the existing system of accounting and planning. The author points out another way--to augment the system of balances of the national economy with a balance of monetary circulation. The structure and methods of calculating the indicators of the balance will provide for relating its information and content to indicators of the balances of the social product and national income, on the one hand, and the consolidated financial balance of the state and the balance of monetary incomes and expenditures of the population, on the other. The interconnection of the three groups of balances--the social product and national income, monetary circulation, and financial and monetary resources--should be reinforced with formalized algorithms for the transformation of information in such a way that the results of calculations of the first group of balances could serve as initial information for the next, and so forth.

The author has developed a special classification of monetary flows in terms of their economic content and the methods of measuring them on the macro level according to data of current statistical and planning information. The methods make it possible to combine individual monetary operations into a monetary flow between payers and recipients of money, and also to compare the volumes of monetary flows with the value indicators of production balances and the distribution of the social product and the national income. The original methods of measuring the monetary flows in the national economy lay at the basis of the numerical calculations of the interbranch and consolidated balances of monetary circulation.

The schema of the interbranch balance of monetary circulation presented in the book was, in our opinion, a successful attempt to represent monetary flows of the national economy in the form of a compact and visible chessboard. Two

"accounts" were opened for every branch of the national economy and industry, the population and the finance and credit system--a line for accounting for incomes and a column for accounting for expenditures. At the intersection between the column of subject A and the line of subject B, one finds the sum which A transfers to B for material values and services, in payment for labor (if B is the population) and so forth. The incomes and expenditures of the branches and the population are equalized by their payments to the finance and credit system or the funds received from it. The indicators of the interbranch balance of monetary circulation correspond directly to the figures on the interbranch table of the social product. The author has developed an algorithm for transforming the product balance into a monetary one, and the possibilities of its application are illustrated by numerical calculations. The result of the research is of undoubted practical value: it makes it possible to combine the development of the product and monetary balances and to evaluate the variants of the development of the national economy from the standpoint of their material-substantial and commodity-monetary coordination.

The interbranch balance of monetary circulation clearly characterizes the redistribution of incomes among the branches of public production and between the state and the population. It is important that the redistribution of incomes here does not include repeated accounting or counterpayments. In interrelations with the finance and credit system, the economic branches act either as the payer or as the recipient of funds, and the "net" balance of payments is characterized by the amount by which the branch's incomes exceed its expenditures. In the opinion of the author, in future calculation of the formation and utilization of financial and credit resources, the "net" balance should serve as the initial one for determining the turnover taxes, deductions from profit into the budget, sources for financing capital investments and increasing circulating capital and, in certain cases, for revising wholesale and resale prices. It is an interesting proposal, although debatable.

In the schema of the consolidated balance proposed by Sh. B. Sverdlik, the problem of the commodity and monetary balance is solved with respect to the distribution and redistribution of the conventional net product of the national economy. The model of the consolidated balance includes the system of basic and auxiliary accounts of subjects of circulation and the system of balance equations that characterize the dependency between the incomes of the recipients of money and the expenditures of all of its contracting agents. It is simpler to realize than the interbranch balance is since for calculations it does not require coefficients of monetary expenditures. Yet it contains a good deal of additional information as compared to the interbranch balance.

There was a time when the designing of a formalized model of any economic process was considered a scientific achievement. The attraction of modeling for the sake of modeling has passed, and now the readers of economic and mathematical literature are interested primarily in the cardinal question: for what purpose and why does one propose a model whose introduction into the system of national economic accounts will require labor and expenditures?

The first and perhaps the main purpose of the models proposed by Sh. B. Sverdlik can be found in the fact that in the stage of development of the plan for the economic and social development of the national economy he verified the coordination of interconnected material-substantial, value and financial-monetary indicators that were projected by various departments. As a result, even in the first, initial stage of planning one eliminates cases in which A intends to receive from B one sum of money and B intends to give to A quite a different one.

But the coordination of the entries of related monetary operations into the accounts of the payers and recipients of funds shows only a formal balance of the monetary circulation. A formal balance is also achieved when, for example, the effective demand of the enterprise for means of production or of the population for consumer goods is far from fully satisfied. The surplus monetary funds remain in the bank accounts of the enterprises or in the savings accounts of the population, after which the incomes of the enterprises and the population end up to be equal to their expenditures.

The author of the book introduces the concept of allowable balance in which certain limitations are placed on the amount of balancing positions of incomes and expenditures (in the example--the monetary funds of the enterprises in bank accounts or of the population in savings accounts). The universal limitation of allowable balance of monetary circulation in the national economy is the observance of the requirements formulated by K. Marx of the law of the quantity of money in circulation. Yet under concrete conditions one should take into account the interconnection between the balance of monetary circulation and various combinations of balancing positions of other resources of the balance. "Thus it might turn out that in order to eliminate the disproportions that have taken form between production capacities in individual branches or in order to update the technical potential as quickly as possible it would be expedient temporarily to allow an increase of the quantity of money in circulation" (p 35).

And so, if a disbalance of monetary circulation leads to a weakening of the "economic health," it is necessary to have "thermometers" which make it possible to promptly reveal deviations from the norm. The economic and mathematical model for a retrospective analysis of the formal and allowable balance of the monetary circulation serves as a kind of "thermometer."

When looking over the calculations presented in the book one is imbued with the conviction that central planning, statistical, financial and bank organizations, which have a more complete set of information, are quite capable of developing similar balances with high precision and for a large group of subjects. And together they could "play out" the projectory of the development of the national economy for the selection of comprehensively (not only from the position of physical items, but also in terms of money) balanced variants. One gets the impression that the author himself has not yet clearly recognized all the possible "conclusions" of his suggestions for science

and practice. But the main thing here is the example of the scientific correctness when, instead of a dozen "projections" one gives a good plan that is reinforced with scrupulous substantiation of the methods of calculating the indicators of the balance in analyzing their interconnections.

Sh. B. Sverdlik has set the task of demonstrating the potential possibilities of models of monetary circulation in retrospective and future calculations. He has succeeded with the first part of the task. The book is "stuffed" with analytical calculations and tables which taken together give a fairly complete representation of the influence of substantial-value and branch structures of the social product on the monetary circulation of the national economy during 1960-1975.

Of greater interest, however, are the methods of analysis themselves. The main monetary flows are investigated in their dynamic during 1960-1975 from two points of view--that of the payer and that of the recipient of the money. Thus he first investigates factors of the growth of the wage fund as an element in monetary expenditures of public production (on the whole and for the branches), and then the role of this fund in the monetary incomes of the population. Thus a bridge is built from production factors (the dynamics and value structure of the social product) to factors of the effective demand of the population. He similarly investigates the monetary flows between the population and production, and private consumption of material goods and services. As a result the monetary incomes and expenditures of the population are given a reproduction interpretation, which cannot be achieved with analysis of the data of the existing schema for the balance of monetary incomes and expenditures.

In our opinion, Sh. B. Sverdlik has used an interesting device in analyzing the interconnection between capital expenditures and outlays on increasing material stock. Including in the calculations a certain time lag, he shows numerically that coordinated development of the two aforementioned elements of the accumulation fund accelerates the growth of the production volume and vice versa.

Less convincing is the analysis of the calculations of monetary circulations for the future. The core of the interbranch model that is drawn up is the matrix of direct monetary expenditures per ruble of output and work. Individual elements of the matrix (normatives of wages and payments into the budget from profit per ruble of output) are already applied in planning, and the normatives of material expenditures per ruble of output were introduced in 1983. But the sphere of application of these normatives is still limited to individual branches of the national economy, and their structure is somewhat different from the structure of the coefficients of direct monetary expenditures which the author utilizes in his calculations. The development of the values of the coefficients of direct monetary expenditures for the future will obviously require solid methodological support and no small amount of

work. The experience in applying economic and mathematical methods on the macro level, in branch planning and at individual enterprises shows that "start up" expenditures are completely justified. The first developments of the interbranch balance of the social product were also episodic in nature and cost a good deal of effort, but now they have entered firmly into the system of planned balances of the national economy. Additionally, one can reproach Sh. B. Sverdlik for the fact that he was silent about the methodological aspect of the development of coefficients of monetary expenditures and did not show the possibility of retrospective analysis for predicting them. The author left open the question of the exogenic and endogenic parameters of the model of the consolidated balance, and he did not show the possibility of extrapolation or econometric prognostication of exogenic structural coefficients of the model. Yet certain structural relations between indicators of the development of material production and monetary circulation, which the author calculated when analyzing report balances, are fairly persistent in nature and can, in our opinion, be useful in long-range calculations.

On the whole, Sh. B. Sverdlik's book is a contribution to the investigation of the crucial problems of balanced growth of the Soviet economy. It deserves the attention of the scientific community, planning and financial organizations and teachers and students of economic VUZ's and specialties. The book can provide material for business gains, for studying monetary circulation.

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JURISTS ACCLAIM LAPTEV'S BOOK 'ECONOMICS AND LAW'

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
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[Review by L. S. Dzhomardzhidze, doctor of jurisprudence (Tbilisi) and A. A. Shorkin, candidate of jurisprudence (Gorkiy) of the book "Ekonomika i pravo. Teoriya i praktika pravovogo regulirovaniya khozyaystvennykh otnosheniy" [Economics and Law. Theory and Practice of Legal Regulation of Economic Relations] by V. V. Laptev, Moscow, "Ekonomika", 1981]

[Text] One of the important elements of the economic mechanism is legal regulation of economic relations. V. I. Lenin emphasized that the economic policy must be "reinforced legislatively to a greater degree in order to eliminate any possibility of deviation from it."*

The new book by V. V. Laptev is devoted to economic and legal questions of socialist management and their interconnection.

The clearly expressed practical direction of the book has attracted the attention of workers of ministries, departments, enterprises and associations. One of the authors of these lines had occasion to see an interesting situation in the USSR Ministry of the Automotive Industry, literally immediately after the publication of the book. An operations conference was in progress in the office of the deputy minister. They were discussing a letter from the director of the Kuybyshev plant for automotive tractor electrical equipment about the action of the Soyuzavtoelektropribor All-Union Production Association which, having set for the Kuybyshev plant an additional production assignment for the manufacture of several thousand generators for the ZIL, did not provide for material and technical supply. The Kuybyshev workers concluded an agreement with ZIL, but because of the lack of funds for supply, it did not fulfill it and pay the fine for the shortage and deliveries. The plant director justifiably asked the chief of the Soyuzavtoelektropribor All-Union Production Association why the plant should sustain losses because of the inefficiency of workers in the association. Having heard the chief of the legal division and the representative of the arbitration board of the ministry, the deputy minister unexpectedly took out the book by V. V. Laptev,

*Lenin, V. I., "Poln. sobr. soch." [Collected Works], Vol 45, p 244.

"Economics and Law." After a short commentary, having opened the book to the previously marked page 152, he read: "These cases include the aforementioned responsibility of the administration of the industrial association to the enterprises which have sustained property loss as a result of a change in the plan. This responsibility is envisioned in point 44 of the General Provisions Concerning the All-Union and Republic Industrial Associations..." "The law," he went on to add, "makes it incumbent on the management of the industrial association to solve that problem independently, but it could not do this. The ministry will rectify it." The decision adopted at the conference made it incumbent on the Soyuzavtoelektropribor All-Union Production Association to compensate the Kuybyshev plant for the sum of fines through its own reserve funds.

The book has seven chapters. Step by step, the author leads the reader from one area of the interaction between economic and law to another. The chapters have different practical directions: those such as "Economic Relations and Their Legal Regulation," "Legal Organization of Production Economic Complexes," "Socialist Property and Legal Conditions of Its Facilities," and "Legal Aspects of Planning Economic Activity" are mainly theoretical, although they all contain practical recommendations for workers of ministries, departments, enterprises and associations. It is simply that there are more of these recommendations in other chapters of the work, for example, in Chapter 4, where he analyzes the legal forms of autonomous financing. His profound knowledge of theory and practice of autonomous financing enables the author to answer questions that interest economic managers.

Let us consider one of them: intrabusiness accounting and its legal forms. V. V. Laptev's contribution to the development of the theory and practice of intrabusiness accounting is well known.* But in this work he draws new conclusions (page 118 and others). Economic managers have many questions related to the role of illegal service in intrabusiness accounting. Before the end of the 1960's legal divisions of enterprises and associations did not devote serious attention to this problem. A certain negative role was played here by the opinion that intrabusiness relations are not legal, an opinion which was not the dominant one but was fairly widespread in the theory of legal regulation. And if this were the case the legal consultant should not be interested in them-- this is the business of economists, technologists and bookkeepers.

This approach was shared for a long time by economic managers as well. The new conditions for management force them to change their attitude and to direct the legal services toward active utilization of legal means in intrabusiness relations. But echoes from the past can be heard even now. Even at the leading enterprises, whose experience V. V. Laptev uses in his work, the legal services solve this problem in various ways. For example, in the VAZ,

* See Laptev, V. V., "Vnutrikhozyaystvennyye otnosheniya na promyshlennyye predpriyatii (pravovaya organizatsiya)" [Intrabusiness Relations at the Industrial Enterprise (Legal Organization)], Moscow, "Yuridicheskaya literatura", 1965.

KamAZ, MAZ and other production associations, jurists not only investigate intrabusiness complaints, but also apply sanctions. The manager of the legal service is the deputy chairman of the arbitration commission. But in the GAZ Production Association the situation is somewhat different: here the jurists are limited to participation in the preparation of local normative acts that regulate intrabusiness relations, and resolve disputes and penalize officials for violations of commitments.

It seems that it is possible to step up legal work at the enterprise (association), including strengthening contractual discipline, only by expanding the rights of the legal service. This is shown by the increasing authority of legal divisions of the KamAZ, VAZ, MAZ and other production associations.

Chapter 5 is devoted to the economic contract. Considering its content and role in the socialist economy, the author analyzes the economic contractual ties of enterprises, production associations and organizations, and gives recommendations which are undoubtedly useful both to workers of supply-sales and legal services, and to workers who are engaged in the development of various kinds of normative acts. The recommendations take into account the planned nature of the economic agreement in the socialist economy. V. V. Laptev notes that the "economic agreement is becoming a kind of planning document" (page 164).

Although the author touches upon the peculiarities of various kinds of contracts, he devotes most of his attention to delivery contracts. It is valuable that the analysis of these is conducted taking into account the "Provisions on Deliveries" of 1981. In this new normative document a number of issues are resolved differently than the "Provisions" of 1969 which were previously in effect. V. V. Laptev draws the attention of the readers to an important peculiarity of point 29 of the "Provisions on Delivering Products for Production and Technical Purposes," where monthly time periods are related with deadlines. In the previous "Provisions" the time periods were established by the quarter, if not stipulated otherwise (within the quarter) in the contract or the "Special Delivery Conditions." The author draws a principally new conclusion: if the order indicates quarterly time periods and the parties when concluding the agreement have not agreed upon the time periods within the quarter, the delivery should take place uniformly throughout the various months (page 168). The conclusion is of great significance for the practice of contractual relations. Unfortunately, certain economic managers still are not considering this requirement. As before, there are many agreements in which the manufacturers insist on quarterly time periods. But when there are disputes about the failure to deliver products, the arbitration commission exacts a penalty for violation of monthly time periods, even if quarterly time periods are stipulated in the agreement. This is precisely what the State Arbitration Board under the Gorkiy Oblispolkom did in 1982 with respect to claims of the consumers against the machine tool building plant.

The author devotes a great deal of attention to the relationship between individual planning documents and the economic agreement. Anticipating changes in the legislation that followed the publication of the book, V. V. Laptev

discloses in detail the priority of the interests of the consumer. He draws attention to a different approach to the right of the consumer to refuse products or consumer goods. If the consumer has a right to refuse products for production and technical purposes both at the time and after the conclusion of the agreement, the situation is different with respect to consumer goods: the consumer can refuse them only if he does not need them and this can be substantiated. It is noted that this rule has the purpose of more providing for the interests of the population. Thus in 1982 several sewing associations of the city of Gorkiy violated the deadlines for the delivery of items that had been ordered for sale in the trade network during the summer--they were manufactured late in the autumn. Taking advantage of its right, the trade organizations refused the goods for which there was no demand by that time. This sanction exerted an influence on the strengthening of contractual discipline.

The reader will undoubtedly recall the instruction to the effect that without coordination in the agreement of all existing conditions (quantity, products list, assortment, quality, delivery dates, prices, policy for accounts, method of delivery and so forth) it is not considered to be concluded. Additionally the work presents recommendations for resolving disputes that arise when concluding agreements.

The book also considers the organization of economic ties. Special attention is devoted to the policy for establishing direct, long-term contractual relations. The order of the consumer should correspond to two planning documents: the plan for assignment and the annual assignments for the production of products. In these cases orders are not issued, but the agreement for direct long-term ties can determine the annual plan of the manufacturer. It is precisely in this situation that he acts as an instrument of planning or, using V. V. Laptev's terminology, is a form of the joint planning decision of the organizations that conclude the agreement. The planned organization of economic ties is a most important feature of contractual relations.

The author emphasizes the expediency of concluding a single agreement for the organization of supply with the territorial supply administration, and not its subdivision. In the recently adopted "model agreement for the organization of material and technical supply of the production association, enterprise or organization, which was approved by a decree of the USSR Gosplan of 30 December 1981, this recommendation is taken into account.

Finally, the author also considers this practical problem: who has a right to sign an agreement? It is clearly stipulated in the work that this right is granted to the manager of the association and his deputy. All other workers must have the appropriate authorization when signing an agreement.

Still one wishes to note one peculiarity in the documentation of contractual relations which has appeared in recent years. In certain cases the workers of enterprise do not have special authorization and are acting on the basis of

provisions concerning the corresponding subdivision of the enterprise or production association. Thus the chief of the administration for metal supply of GAZ, when concluding delivery agreements, is guided not by the authorization, but by the provisions concerning the control of metal supply. The general director has given him the right to conclude agreements concerning the supply of metal on behalf of the association without a special authorization. This experience is attractive to many economic managers since it eliminates excessive formalism.

The work is concluded with a chapter devoted to responsibility in economic relations. Developing the idea about the principle similarity of individual kinds of economic relations, the author also shows their specific features. V. V. Laptev notes that the new policy for evaluating economic activity, measures of responsibility for fulfillment of the plan and the economic agreement are becoming more similar (page 193). This corresponds fully to the nature of economic relations.

The practice of awarding bonuses to management workers for the fulfillment of assignments and commitments for deliveries has revealed a curious detail. In those cases where the manager has been deprived of a bonus for failure to make deliveries, it is frequently compensated for (even with a surplus) with other kinds of bonuses. The existing legislation allows, in addition to incentives for fulfillment of the delivery plans, bonuses for management workers for more than ten other reasons (for example, for fulfillment of the plan for deliveries for export, economizing on electric energy, gathering scrap metal and ferrous and nonferrous metal wastes, introducing new technical equipment, from the results of socialist competition, and so forth). This practice, even if it is negative, shows that it is necessary to increase the role of bonuses for the fulfillment of plans for deliveries and agreements.

Thus, V. V. Laptev's remark is directed toward studying the practice of awarding bonuses and improving it. "It is necessary to create conditions--economic and organizational--which would stimulate high-quality, productive labor, initiative and enterprisingness. And, conversely, poor work, inactivity and irresponsibility should be reflected in the most immediate and irreversible way in the material remuneration, in the job position and in the moral authority of the workers.*

V. V. Laptev's work is a new step in the development of the theory and practice of legal regulation of the economic mechanism. The author shows the active creative role of the law in the socialist economy. The book will be interesting to a broad group of readers, above all economic managers, economists, planners, and workers of material and technical supply agencies, sales agencies and legal services. It can be used as a training aid in courses for increasing qualifications and it will be useful to students in law and economics VUZ's.

*Materials of the Plenum of the CPSU Central Committee of 22 November 1982, Moscow, "Politicheskaya literatura", 1982, p 9.

PSYCHOLOGIST CHARACTERIZES MANAGER PERSONALITIES

Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA* (EKO)
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[Article by L. D. Kudrayashova, candidate of psychological sciences,
Leningrad State University: "Again About Styles of Management"]

[Text] They say that style is the person. We are trying to place a kind of a classification on the types of managers, depending on the style of their work. It would hardly be possible to create an exhaustive "table" which would embrace the entire diversity of actual managers (regardless of what indicators we may consider). Therefore, without claiming universality, we propose that the readers become familiar with the results of our observations.

Regulator

The ideal of this style of management is complete regulation of the activity of subordinates in official instructions, orders, normatives and so forth. It is presumed that after achieving this ideal the machine of administration will be adjusted once and for all. Of course, formalization of the interrelations between managers and subordinates, and also business contacts and actions of the workers are an important lever for increasing the effectiveness of administration. But complete regulation is impossible since during the process of the activity of the labor collectives there inevitably arise situations in which the formal approach is unacceptable in principle. "Excessive regulation" leads to a situation where there is no space for creative activity: when any problems appear the workers begin to look for the answers in all kinds of documents and orders. This inevitably gives rise to decisions which are not optimal, which are taken in nonstandard situations--for they are "forced to fit" into previously issued instructions. Moreover, any regulation, regardless of how perfect it may be initially, inevitably becomes outdated with time.

The manager-regulator, striving to "hide" behind papers, to replace the real administrative process with them, usually enters into contacts with people

poorly. There is frequently an unfavorable psychological climate in the collective of which he is in charge. And this is not surprising! If reasonable regulation increases the effectiveness of administration as the result of making instructions more objective and eliminating the subjective factor, in doses that are too large it worsens the control of the collective since it ignores psychology even in those areas where it plays an important role. An excessive desire to regulate is fraught with bureaucratism.

Committee Manager

This type of manager sees a guarantee of the effectiveness of administration exclusively in the utilization of collective forms of decision making. In his activity he devotes an important place to the organization of all kinds of commissions, regular meetings, conferences and sessions; he is usually attached to democratic methods of management. There is no doubt that this corresponds to the main principles of socialist enterprises.

But absolutization of the committee forms of administration leads to a reduction of personal responsibility for the decisions that are made. It seems that a purely committee style is justified in those cases where either there is no point of view on some problem or its solution is unclear, or when the question that is being discussed is within the competence of many people. But an extreme increase in the number of meetings and conferences, the desire to coordinate any problem almost always bears witness to inadequately effective administration. Research shows that many commissions are unnecessary and even lower the level of administrative work. At enterprises that are related in terms of their profiles, the proportion of decisions that are made collectively should be approximately the same. And if this proportion is significantly higher than some average level, this almost always indicates poor administration of the enterprise. The most simple way of discovering this is to count up the number of meetings, conferences and sessions that are held and how many permanent commissions are created.

Sprinter

"The manager is like an actor on a stage," this is the way one of the managers of a construction trust expressed the credo of the "sprinters," "at the moment when the spotlight falls on him he must play well." Managers who adhere to this style of activity react well to rapidly changing administrative situations and make decisions promptly. They are usually capable of making a business career. The manager of this type is irreplaceable when it is necessary to mobilize all forces for solving some difficult problem. But, while surpassing many others in tactics, the "sprinters" loose out in strategy. The enterprise of which they are in charge frequently operates irregularly and all kinds of emergencies are built into the system. The enterprise frequently does not have a long-range plan for development, and if such a plan exists, it suffers from a number of shortcomings.

Objectivist

He relies mainly on the so-called objective factors, which he uses to explain successes and failures in administration. Typical considerations of "objectivists" are: "the plan was not fulfilled because there were irregular deliveries and we had difficulties with the labor force. Labor turnover at the enterprise is high since we do not have enough dormitories, not enough housing is being constructed, and so forth." Undoubtedly, objective factors play an important role in administration. But if everything amounts only to them and one cannot counteract them, then why should there be an administrative staff? A high degree of dependency on this kind of factors is evidence of ineffective administrative activity.

Red Tape Lover

The motto of the "red tape lover" is: "any paper should have a rest." He puts off solving administrative problems in all ways, desiring, moreover, that for each of them to "age" and solve themselves. Written instructions do not affect the "red tape lover": they too will be put away in the long drawer. Strange as it may be at first glance, his activity also has its positive aspects: indeed, there are problems which can be best solved by putting off any decision at all. For example, when in conflict situations any attempt to resolve them only inflames the conflict. In this case it is really better to wait with everything until everything smooths itself out. And, finally, such an attitude helps to avoid unnecessary proliferation of papers and the circulation of various kinds of instructions. But still the harm from this kind of manager is usually greater than any good.

Maximalist

The "maximalist" does not recognize "trivial" problems of administration. He is not satisfied with the solution to a problem simply on a good level, and always strives for the maximum possible. If the supply system could be improved to the point where there could be no possibility of interruption; if an automated control system could be introduced so that the system controlled all aspects of life, and so forth. The "maximalist" considers the most important quality of the manager to be the ability to generate ideas. They suppose that a well-thought out and substantiated idea in and of itself is a "productive force." The "maximalist" reduce the role of their deputies and assistants to concretization and practical embodiment of that kind of idea, almost not involving them in the development of the latter. They frequently underestimate the role of material stimuli in administration and complain about the imperfections of their subordinates and about the fact that the latter think in trivial categories and are not able to understand large-scale problems. "Maximalists," as a rule, are very energetic, they "burn" at work as it were.

Unfortunately, such a manager frequently does not notice current, daily problems, does not like them, and cannot deal with them, and this threatens his high goals.

Organizer

This type of manager thinks that the most important thing is to solve key problems which include primarily effective selection and placement of administrative personnel, the development of effective and at the same time realistic plans and material and technical supply. In their opinion, the manager does not need to deal with anything else. But, as distinct from the "maximalist," the "organizer" has a different understanding of key problems. These are not so much ideas and not goals of development, as directions of activity. The "organizer" deals with these problems personally, he does not entrust them to anyone and he absolutely must reach a decision, as it were, in a "materialized" form. He is far from idealizing his subordinates. Rather, on the contrary, he usually proceeds from simplistic ideas about them allotting the main stimulating role to material factors. For managers and specialists whom he values, the "organizer" persistently provides personal wage increments.

The force of the "organizer" lies in the fact that he is never bogged down by current affairs, is able to achieve solutions to important problems regardless of what may be happening, and he is not stopped by difficulties, conflicts or penalties. For example, he is not stopped by a reprimand for high labor turnover if he thinks that firing inept and unskilled workers is the only possible method of improving the selection and placement of personnel in the existing situation. Like the "maximalist" and "organizer," he frequently dismisses current affairs, assigning them to deputies and assistants, but not because he does not consider them important, but because he himself does not have time to deal with them.

Restless Person

His motto: "administration consists of trivia." He always has his documentation in order, conferences begin precisely on time, he never forgets his promises, and he usually manages to do everything he intends to do during the working day. He keeps a multitude of minor matters in his head all at once. He contacts subordinates exclusively on business matters, and his remarks and assignments are always concrete. The "restless person" is distinguished by high executive discipline. He thinks that management can be effective only with his personal presence at the various facilities. Sometimes this becomes "fashionable." It is thought, for example, to be good style if the manager of a trust and his deputies spend a good part of the working day at the construction sites and are in their offices only at the beginning and end of the working day. Personal acquaintance with the object being managed is a necessary aspect of activity, but to absolutize it leads to giving priority to current affairs over long-range and fundamental ones, and it also inevitably leads to overloading the manager. Moreover, adherence to this style of administration frequently leads to duplication by the higher manager of functions that are to be carried out by lower ranks.

As a result, the manager "drowns" in current affairs and cannot distinguish between what is major and what is secondary. His working day is considerably more than eight hours. Nobody works as hard as the "restless person."

Several Conclusions

This classification certainly does not claim to be complete. Moreover, the types of managers have been generalized. In reality it would hardly be possible to meet such concentrated characteristics: even if on the whole the manager is, say, a "maximalist," one can still find in him some of the other types.

Each of the styles considered above has its strong and weak points. Not one of them can be absolutized. Each of them has some advantages and some disadvantages as compared to the others. It is unthinkable to search for a universal style of management which is effective in all cases of life: it simply does not exist. The art of administration consists in something else--in the ability to interweave the best features of each style into a total process of administration, in switching from one style to another and in utilizing the advantages of each style, depending on the administrative situation. Thus, practical experience shows that most frequently effective administration is carried out by the organizer manager, since orientation toward solving long-range problems is an guarantee of effective administration. The "restless person" who is a manager copes well with the management of small production collectives. It frequently turns out to be unjustified to promote these managers to higher positions (for the larger the subdivision, the greater the role that is played by long-range and fundamental problems of administration). The "maximalist" is more suited for the management of scientific research organizations than production subdivisions. Managers with the "sprinter" style frequently succeed in bringing a backward enterprise out of its slump.

Administration is effective when the manager can select the style depending on the situation, and not vice versa.

But it is necessary to take into account the fact that there are no managers who can master the entire spectrum of administrative methods equally well. Even a very capable manager displays in his activity an adherence to some particular style which corresponds most fully to his individual peculiarities and character. Nonetheless a good manager has the ability to go beyond the framework of his customary style of management if such a need is dictated by the administrative situation.

The question of the compatibility of managers with various styles is also of practical interest. For example, if a director is a "organizer," who is most suitable for the position of head engineer--the "maximalist" or the "restless person"? This questions requires special research.

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CAN FORMER BUDDY BECOME SUCCESSFUL SUPERVISOR?

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 199-201

[Readers' comments solicited in Response to article in GDR Journal "Für Dich"
translated by B. P. Kutyreva: "From Buddies--to Managers"]

[Text] Question

The reader Joachim M. from Dresden sent a letter to the editorial staff of the journal "Für Dich" (GDR) with the following content: "I do not know what to do. I have been in our collective for five years already. We trust one another. We do not always tell the master about what we are doing. For example, when he is not here, certain workers go home early. Or we sit around and do nothing. Some time ago I began to study to be a master, assuming that after I completed the study they would send me to another shop. But in the personnel division they decided to leave me in the section because our master had gone on a pension. I was very upset: will I be able to hold out among my own fellow workers? After all, I myself have not always been disciplined and now it is necessary to supervise others! My question: 'can a person become a manager with authority in the collective where for years he was simply a buddy?'"

We asked this same question of EKO readers.

Answer

The "Für Dich" editorial staff, with the help of the director Ursula Peters answered the reader's question as follows.

Dear Joachim M.!

Your letter reminded me of a case with one Berlin worker in a specialized store who was indignant about a defect in a new household appliance. But then (imagine his emotion!) he discovered that the defect was in a block which was manufactured in his shop... You are speaking not about the quality of a product but the quality of behavior, or, more precisely, about labor ethics. Incidentally, the two are closely interconnected. A lack of conscientiousness in labor can hardly lead to high quality, and absences do not

increase the quantity of the items. But you know this as well as I do. The reasons for the lack of discipline in your labor collective are worthy of study. But you have to overcome a serious conflict.

Here, in my opinion, is what you should do to resolve the conflict. Apparently you have already taken the first step: you have recognized that the conflict exists. Otherwise you would not have sent the letter. You are already applying certain criteria to your behavior and the behavior of your colleagues and evaluating it from a new standpoint, which would hardly have been possible a half year ago. The evaluation comes through even from the words of your letter. It is clear that you have recognized actions that stand in contradiction to the ethical criteria of a socialist society.

Since you have been given clear and direct responsibility, you must draw some conclusions from your behavior and liberate yourself from your habits of the past. Because the requirements of the enterprise, the plan and the society are now much more strongly concentrated in you personally.

But what about the others in your section who are not performing management functions? Do they not bear any responsibility? Is it true that responsibility ensues only from management functions and not from our common function of owners and participants in the administration of our socialist society?

You know the problem, as it were, "from below." But now, having risen because of your position to a kind of height, you see further and more deeply what your training to be a master probably contributed to. But why do you not invite your buddies to participate in this? Of course, in addition to functions, managers are "given" authority. For they are responsible for the organization of production, but the responsibility and authority of the manager can be effective, in the final analysis, only through the recognition which he receives from his colleagues. This depends on his own achievements and on his point of view and, not least important, on how he is able to deal with his colleagues. Especially important are relations that are built on confidence between the manager and his coworkers. These relations, in turn, are impossible without respect for others, understanding and honesty.

But let us return to your concrete situation. Present your doubts to the collective, explain to them what is bothering you, raise the problem for discussion. Ask them all again: "What would you do in my position?" It is important for the coworkers to imagine that they are managers of the collective or, in other words, in their own behavior and through their own behavior become an example for others. It is difficult to overestimate the value of an example.

And so, initiate your friends into your problem. Possibly they will see something that you have not noticed. Then it would be good to discuss openly the factors that led to the decline in labor discipline. Openness and honesty in this case are achieved more easily since they also require this of you personally. What conditions have contributed to making the lack of discipline

into a habit? What causes should each one look for in himself, in their relations with each other or in the external circumstances, for example, in the style of management?

After clarifying the causes, one should discuss in detail how to eliminate them.

This is how I advise you to act. Allow me to warn you not to give in to illusions. Changes in behavior, which has already become a habit, cannot be achieved in one fell swoop, and words alone are clearly not enough. A lengthy process is needed. Actions must be taken. The appearance of various kinds of contradictions is not ruled out, but these are precisely what can mobilize a good collective. If the collective is goal oriented, the work is well organized and everyone understands one another well. And the last thing: if the manager acts correctly, his former colleagues will become his friends.

Like the "Für Dich" editorial staff, we invite the readers to share their experience and ideas about how best to become a manager of one's former colleagues. This is the more important since today at enterprises there has been a sharp increase in the number of managers who were previously workers. The brigade leader is usually a worker. How can he switch from one role to the other? Perhaps the answer of director Ursula Peters will help you to find other variants?

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BICYCLE RIDING FOR HEALTH ADVOCATED

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in Russian No 9, Sep 83 pp 202-209

[Article by Ye. M. Bukhval'd, candidate of economic sciences, Institute of Economics of the USSR Academy of Sciences (Moscow): "Devise a Bicycle for Yourself"]

[Text] One of the oldest residents of Italy, Mateo Solinas, lived to be 106. It is curious that the last 75 years of his life he was an honored member of the Italian Federation of Bicycle Riding. In 1885 the ten-year-old Mateo learned to ride a bicycle and since that time, even in his declining years, he took a bicycle ride absolutely every day.

Today throughout the world for millions of people a regular trip on a bicycle has become a mandatory condition for a healthy, active life.

Of course, the number of devoted bicycle riders is no longer so great and in terms of numbers it cannot compete with runners. But the many advantages of the bicycle as a means of health leave no doubt that the number of its enthusiasts will increase rapidly. The bicycle "synthesizes" three positive factors at the same time, regular physical exercise, a wealth of emotional sensations from the rapid change of roadside impressions, and, finally, the possibility of solving certain transportation problems in intraurban traffic.

My personal experience and the experience of my friends show that taking regular trips on a bicycle over long and short distances from early spring until late fall exerts a positive influence on one's sense of well-being and ability to work. The muscles become stronger in the legs, back and shoulders; the indicators of the functioning of the cardiovascular system improve sharply, there is resistance to colds, and emotional balance and, conversely, there is a decreased tendency toward various kinds of neuroses. Bicycle riding makes it possible to escape the burdens of everyday concerns and nervous overloads which is especially useful for people who are engaged in mental labor.

It is best to ride on special bicycle trails, dirt country roads and field and forest roads. The clean air, the diversity of physical actions of the bicycle rider and the need to react rapidly to a difficult road--all this not only conditions the body, but also suppresses various kinds of painful sensations and experiences. The tempering, endurance and a good mood are

the result not only of long bicycle rides on days off, but also of ordinary evening rides, trips to the stores or simply morning rides to work.

Not being a specialist, I, of course, cannot analyze completely the merits or shortcomings of one health system or another. But I am deeply convinced that the right to be popularized and to broad public support belong primarily to those which, in addition to positive medical and biological consequences, provide each individual with profound emotions, satisfy spritual-cognitive and creative interests and instill a feeling of collectivism and comradeship. These are precisely the possibilities that are created by the remarkable two-wheel machine--the bicycle.

Because of this advantageous combination, the mass attraction of the bicycle has, as they sometimes say, the "bicycle boom," has now embraced many countries of the world. In the United States, for example, the number of bicycle riders has increased from 23.5 million in 1960 to 100 million by the present time (with a population of 225 million). The percentage of bicycle riders is even higher in the GDR: with a population of 17 million, there are 10 million bicycle riders here, or two for each family. The "bicycle fleet of France" includes 18 million two-wheel pedal machines, there are 30 million in the FRG and almost 40 million in Japan. One could call Denmark the "country of bicycles" where with 5 million people, there are 3 million bicycles and each year about 400,000 new two-wheel pedaled machines are sold.

The Bicycle and the Economy

In many foreign countries the popularity of the bicycle and, correspondingly, the increased number of two-wheeled machines is stimulated not only by the individual health interests of the consumers who are amateur bicyclists, but also by purely pragmatic considerations. They are related to the capability of pedal transportation to provide a considerable savings of costly fuel, to reduce the roaring flows of automobiles on the streets and their negative influence on the environment of city regions. This already produces an appreciable economic effect.

It is no wonder that in countries where energy and ecology problems are more central, administrative agencies have been forced to take measures to give bicycles the status of authorized and, in a number of cases (overloaded urban centers, recreation zones and so forth) even a priority means of transportation. City authorities close off streets and entire areas to automotive transportation, constructing special bicycle trails and roads, and they construct bicycle parking places at enterprises, institutions and stores, and also paid bicycle parking places for general use.

Of decisive significance here, of course, is the construction of bicycle roads which make it possible in the majority of cases to separate bicyclists from automobile drivers and to make their travel pleasant and safe. To this end, Japan has constructed a special highway with a distance of 1,200 kilometers which is completely for bicyclists--something like a "national bicycle trail."

The campaign for the construction and equipping of the bicycle trail has been developed in many other countries. In France, for example, there are already 17,000 kilometers of special bicycle roads, in Denmark--3,000 kilometers, in Holland--8,000 kilometers and in the FRG--60,000 kilometers. The secret of the love for the bicycle is extremely simple: according to the estimates of specialists, the changeover to extensive utilization of bicycle transportation in the cities of these countries have made it possible to save 5 billion dollars' worth of fuel annually.

There is similar experience in the socialist countries as well. In Magdeburg, which is in the GDR, which is called the city of bicyclists, the distance of bicycle roads exceeds 150 kilometers. The city council here has adopted a special program for the construction of bicycle trails for the period up to 1985.

In spite of the mass nature of domestic bicycling, we are perhaps outside the world bicycle boom. Here is an example. In Denmark up to 15,000 bicyclists gather at the annual bicycle rallies. In Moscow it is difficult to gather even several hundred organized bicycle lovers. The certain arrears in this respect was related primarily to the fact that until recently we have practically no energy, ecological and consequently, economic levers for introducing bicycles. This was the result of the overall inadequate attention to mass health measures--the opposite side of our great achievement--the availability of all conditions for restoring a lost ability to work. What could be better than a bicycle?

The technical base is also unsatisfactory so far. The USSR annually produces only 1 million bicycles, of which 1 million are exported abroad. Based on the actually existing supplies and the average duration of operation of a bicycle (about 7 years), one can estimate the country's supply of bicycles at approximately 28-30 million bicycles (one vehicle per eight-nine people). Unfortunately, the structure of the bicycle products that are produced does not look any better. The proportion of sports and tourist bicycles with modern designs is extremely low (only several percent), and so far only a small proportion of the demand for them is satisfied.

The folding bicycles which were very popular at one time are too heavy and slow. Practically all of the bicycles have to have something added to them, to be improved in some way, although many of the shortcomings are so obvious that they should be eliminated in the stage of production. There are serious shortcomings in the organization of repair service and the supply of spare parts and tires. We have not arranged for industrial production of special bicycle tankards, special clothing or footwear for bicyclists in various weather conditions, and there are difficulties in acquiring lightweight jackets and many other accessories for bicycle riding. Of course, such a situation requires radical improvement, and the key to this is to place a somewhat different emphasis in the understanding of the very essence of the bicycle problem in the country.

A Bicycle--For Everyone

Many authors who are writing about the growing popularity of the bicycle frequently try to cover all questions that arise with one "cap" of the bicycle sport. Yet this kind of arrangement is quite incorrect since it pertains only to modern youth who can still get into condition and enter into the large sport. But the majority of those who are now taking up bicycling are people of middle and old age who have no sports goals for themselves. In this case, any mention of the sport which is quite simply associated by the majority with racing for speed, competitions and so forth is clearly "false advertising."

In our bicycle group, for mutual comprehensive satisfaction at a slow speed, which I have for several seasons already taken out to ride in various picturesque corners of the Moscow area, there are many bicyclists who were born in the 1920's and 1930's. It is absurd to confuse their interests, like, incidentally, the interests of younger bicyclists in turning the pedals for the sake of their health (good company, a good bicycle, a quiet picturesque road, a cheerful stopping place) with the development of the bicycle sport in general. And only having understood and satisfied precisely these, purely prosaic interests of the rank-and-file bicyclists can one realize in fact the idea of the mass nature of the utilization of the bicycle as a means of health.

Our main bicycle force is the federation of the bicycle sport and the sports societies. They are given all the attention and they are given the lion's share of resources. But sports societies and sections are accountable primarily for records and champions, and they understand the mass nature in their own way, measuring it by the number of those who have already been assured a future of high sports results. Those who have not yet achieved this goal are of no interest to the large sport.

It seems that in order to sharply increase the number of adherents of the bicycle it is necessary to utilize the system of the bicycle commissions of the Central Council for Tourism and Excursions and the USSR Federation of Tourism. These bicycle commissions (central, republic, city and so forth) join together hundreds of thousands of bicycle lovers of the most varied ages, physical capabilities and bicycle interests--from masters of super difficult and super long-distance roads to people who simply like to spend the leisure time on their days off cheerfully and usefully riding bicycles. But in distributing the public pie that goes for bicycle needs, these commissions, as compared to the sports societies and sections do not receive very much. The commissions have the support of the councils for tourism and excursions and tourist clubs, but their capabilities are not great. The commissions do not have their own bicycles, repair shops, centralized supply of spare parts, special automotive transportation and, frequently they do not even have satisfactory premises. Of course, these commissions do not raise champions and record holders, but is the health movement which they lead not of great socio-economic importance?

In our country, there are many bicycle commissions working actively, and they are in charge of a large amount of tourist-health and mass organizational work. Among them are the bicycle commissions of Moscow, Leningrad, Kiev, Odessa, Gorkiy, Kaliningrad, Ivano-Frankovsk, and other cities. The Moscow commission for bicycle tourism which was created in 1930 has now practically turned into a club of bicycle lovers where, at any time of the year, both winter and summer, bicycle lovers gather, discussing with a great deal of interest the paths and roads they have traveled and making plans for future trips. Systematically conducting (from April to October of each season) a large number of open (that is, for all those who desire them) bicycle trips on free days, our bicycle commission is stimulating an influx of more and more enthusiasts of the pedal transportation.

But an example of a truly comprehensive and interested solution to the problem of using bicycles is the Lithuanian city of Shauliyay. Shauliyay residents currently see in bicycle riding a great path to the organization of the recreation of city dwellers, the strengthening of their health and, on the basis of this, increased labor productivity. This idea was placed on a solid material and organizational base which was reflected in a special decision of the gorkom in February of 1930.

Now from the city to the recreation zones--the villages of Bubyay and Furtukay there is a fifteen-kilometer bicycle-trail. Along with it a point for renting bicycles has begun to operate. In addition to this it is intended to equip the trail with public catering enterprises and repair shops. Squares and parking places are being constructed in the city for storing bicycles. The consumer service combine has developed models and is sewing convenient clothing for bicyclists. The city automotive inspection team on weekends is offered certain streets exclusively to pedestrians and bicyclists. The growth of the attraction to bicycles on the part of city dwellers is also promoted by the annual "holidays of the bicycle" whose program includes mass trips, cheerful meets and competitions, and exhibits of bicycle equipment from all times and nations. The experience of Shauliyay, apparently, should be carefully studied, generalized and made common property so that in the future it will become a model for all cities and villages to form a complex of conditions for increasing the popularity of the bicycle as an important means of mass physical culture work and of improving health and labor activity.

What measures are necessary today from the standpoint of increasing the popularity of the bicycle in our country?

It is considerably to increase the production of bicycles, having improved the structure of the output and given preference to modern multispeed bicycles which have the necessary bicycle tourist equipment. It is time to begin the output of similar machines of the folding type, the more so since the problem of this design was solved long ago.

To take measures for the construction of special bicycle roads along the main suburban highways around large cities, and also in zones for mass recreation of the workers.

To organize autonomously financed bicycle areas and large parks and zones of recreation with a supply of bicycles for rent and a network of bicycle roads. This is particularly important for enlisting and training beginning bicyclists especially those of middle and old age.

To strengthen and modernize the repair base and the system for supplying spare parts, having organized it, in particular, as a subdivision of the sphere of tourist and excursion service.

To organize city bicycle parking places, squares and premises for parking bicycles near stores for buyers and at enterprises and institutions for their workers who come to work on their two-wheeled transportation. To equip neglected basements of residential buildings as special premises for storing and repairing bicycle transportation.

To actively organize on the basis of bicycle commissions and in all ways to support clubs for amateur bicycle riders, creating material possibilities for extensively informing the population about the work that has been done (putting out posters, articles in the press, announcements on the radio and television) and for conducting mass bicycle tourist measures (rallies and convoys), and also various competitions, evenings of recreation and so forth.

To develop more extensively planned bicycle tourism--group trips on bicycles along an established and previously prepared route--from one tourist base to another, and so forth.

They say that bicycle riding prolongs life by an average of five years. It is clear to anyone that prolonging the period of labor activity of each Soviet individual even not by five years, but by a shorter period of time is tantamount to bringing into the national economy hundreds of thousands of new workers. To this one should add the economic effect from reducing the periods of temporary inability to work. Taking into account all the possible expenditures on popularizing bicycle riding, the balance ends up in favor of the bicycle. And so, the economy unequivocally votes in favor of the two-wheeled pedal machine, our old and reliable friend. Let us "devise" for ourselves a bicycle--so as to live longer, giving ourselves the joy of movement and creative activity.

AUTHOR: Izdatel'stvo "Nauka", "Ekonomika i organizatsiya promyshlennogo proizvodstva", 1983

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LETTER TO THE EDITOR

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 p 219

[Letter from V. A. Sidorov, corresponding member of the USSR Academy of
Sciences (Novosibirsk)]

[Text:] Dear Comrade Editor!

After several years of reading your magazine I have gained the impression that its content is interesting to an extremely large group of readers and that the editors have no reason to take measures to artificially increase this group with publications of pseudoscientific sensations from the area of telepathy or biological fields.

And suddenly there was an article on astrology in the May issue for 1982 (N. A. Agadzhanyan, "Biorhythms: Not a Sensation But a Gage of Ability to Work") with all seriousness the author gives a formula for predicting the future. To do this it is not even necessary to look at the lines on the palm. It is enough to know the date of birth. And then--the synodic and siderial periods of the moon, several magic numbers, determined with astounding precision (seven signs), a couple of incantations and then you manipulate the numbers and you already know what to fear in the heretofore misty future. You do not believe it? Take the Great Soviet Encyclopedia, which the author recommends to you--and you will be convinced: great people who had not read articles about biorhythms, were not careful on "critical" days and died on these fatal days with a probability that was 40-fold greater.

Having published the article, the editorial staff took on a certain responsibility and, I hope, will help us to explain which edition and volume of the Great Soviet Encyclopedia the author of the article used in order to check his methods of predicting the future. The fact is that an analysis of the first two volumes of the last edition conducted on an electronic computer by one of the young scientific workers of our institute showed that the great people mentioned in these volumes died, not knowing that they were thus refuting the methods of N. A. Agadzhanyan. Because of his youth this worker still does not believe that where there is smoke there is fire or that one can discover something in the Great Soviet Encyclopedia...

From the Editors

We also hold that there is no smoke without fire and that the methods for checking could completely coincide with the methods for the initial calculations. Nonetheless, the experience of this publication on an issue which is not within the main realm of our journal will serve as a particular lesson for the editors.

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COMPUTER COMES TO INSTITUTE

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)
in Russian No 9, Sep 83 pp 220-222

[Article by Yegor Belyayev: "A New Path"]

[Text] When they sent to the institute a new deputy for science, our collective was working on a progressive method for extracting minerals. Everyone has recognized this method for 40 years, but they are not introducing it. The collective was struggling as hard as they could for introduction. It had even constructed a glass tower so that any commission could gaze at our progressive method from the top. In the institute's dispensary especially for important guests they arranged a museum of nonore minerals combined with a bar. The deputy head engineer was always in the capital, and on Fridays he sent phototelegrams about conversations in the ministry regarding our progressive methods.

In a word, the main line of the institute was the introduction of the progressive method, and we followed it firmly, keeping up with scientific and technical progress.

But the new deputy had a different point of view. At the first opportunity he gave a heated speech to the effect that the institute is not keeping up with progress because it is not introducing computer equipment. Everyone especially liked the final rhetorical question: "Can it be that nobody else is keeping, and only we are keeping up?..." The sarcasm of the question was more convincing than the technical and economic substantiation.

The institute began to prepare for changes: the information division was interested in whether we would pay additionally for knowledge of algorithmic languages; the laboratory workers formed a line for programming courses in Palanga; the senior cleaning lady, Aunt Pasha, authoritatively explained that the floor next to the machine was iron and they would finally permit her to work at a higher rate.

The progressiveness of the method of extraction clearly lost ground to the progressiveness of the computer equipment...

It was not necessary to prove the inevitability of the introduction of electronic computers. We knew about staff lists, normatives of space and norms for the expenditure of everything one's heart desires.'

Nobody wanted to wait a couple of years until they delivered the electronic computer for the institute.

At the next meeting the board of directors decided to accelerate technical progress. The deputy head engineer was given the assignment of acquiring the computer immediately. The head engineer and the deputy for science took off for Moscow where they scared up staffs and funds for the computer center.

The deputy chief worked quickly. Within a couple of days he had found an electronic computer which one of the branches of the Academy of Science had intended to discard.

True, the chief and the deputy for science made many mistakes in Moscow. They left cognac in places where they should have given a box of candy, and they festively conferred the box of candy in places where they should have simply left it on the table. As a result, they were able to obtain only the staff lists for the computer center, which logically should be provided to all sufferers by the ministry that manufactures these electronic computers. They suggested that they look for supplies and money in their internal reserves.

Some people resisted, but scientific and technical progress marches forward inexorably. The supplies and money were taken from the construction site for the experimental production which had been in progress for eight years. The progress changed from a walk to a run and it was more difficult to keep up with it...

Within a week after the discovery of the internal reserves, the electronic computer that had been discarded by the scientists was shipped in in three trucks and one dump truck.

Naturally, they could not manage to construct a building for the computer center in ten days. It was necessary to crowd the technological divisions which had multiplied too much. Here a question arose: and what will this electronic computer compute? Wise people in such cases say: "If there is a neck, a collar will be found."

While they adjusted the machine, assembled the conditioners, loaded the ceiling with daylight and installed an aluminum floor, while they trained programmers and electronics experts, the management did not lose time in vain, they traveled everywhere and found out what the electronic computer was used for under similar conditions.

Having heard the opinions, the management decided: first we will use our electronic computer for calculating wages. The head bookkeeper almost broke down in tears right in the council meeting and said that this had been handled

for all these years by two bookkeepers and there had been no complaints. She was calmed down and they promised to add an instructor for electronic computers, who would explain to the bookkeepers how to check what had been calculated by the machine. The head bookkeeper immediately began to bargain and managed to get two instructors.

The general area for loading the electronic computer was found successfully and the viability of the problematic aroused no doubts. We will all be all right, we will all receive our wages and therefore everybody is interested in introducing the electronic computer. Not just one particular deputy, but everyone to a man. To put it lightly, on a unionwide scale.

The subsystem for wages pushed our business straight up a mountain. First there were not enough wages, but we gradually discovered a method of earning them. All the laboratory workers were turned into punch machine operators. The electronic computer became our breadwinner. We received information from those who wished it and we would enter it on the punch cards of the client. It is a safe business and the money is fairly good.

Incidentally, I come up with the idea of doing punch cards for the clients. I could not restrain myself. And as you know, you should not suggest anything to the management because you will have to do it yourself. An old truth. Soon I was appointed chief of the institute computer center. The new horizons ceased to be an abstraction.

What do I especially like in computer equipment? The fact that it opened up a new path not only for me. You cannot even imagine how pleasant it is to see the joyful faces of my colleagues!

Yes, but the technology for extraction? Oh, it is still just as progressive. We have been introducing it for 42 years...

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